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NEW SPECIES OF FUNGI FROM VARIOUS LOCALITIES.

BY J. B. ELLIS AND B. M. EVERHART.

* HYMENOMYCETES.

Crepidotus albidus E. & E.

On bark of (*Tilia*)? Ann Arbor, Mich., May, 1894 (A. J. Pieters).

Pileus resupinate-sessile, nearly white, glabrous, ½–¾ cm. across, margin incurved when dry. Lamellæ not crowded, thin, broad for the size of the plant, pallid, becoming yellowish-brown, radiating from a lateral point, spores yellowish-brown, subinequilaterally elliptical, about 5 x 3½μ.

Polyporus pachycheiles E. & E.

On the side of a rotten maple (*Acer rubrum*) stump, Newfield, N. J., Nov. 1893.

Imbricated, small, 1½–2 cm. wide, 1 cm. long, milk-white at first, margin soon turning yellow, mostly narrowed behind, the pilei connected by a resupinate layer, surface apparently velutinous but not tomentose, hardly depressed behind. Pores minute, 2–3 mm. long, 120–150μ wide, round or by the splitting of the walls, here and there subsinuate, margins even, not lacerate-toothed. Flesh of pileus thin, not over 1 mm. thick and like the pores and the whole plant tough-cartilaginous. Surface of pileus faintly zonate toward the margin, more distinctly so in drying. The pores are nearly as long in front as behind, thus thickening the margin of the pileus, hence the specific name.

Poria inermis E. & E.

On dead shrubs and limbs of various deciduous trees, Newfield, N. J. Received also from Michigan, Canada, Nebraska and Louisiana. Issued in N. A. F., No. 313, as *Polyporus obliquus*, from which it is quite distinct.

Resupinate, adnate, seriate, extending along the limb for six inches or more and about one inch wide, yellowish-brown, 2-4 mm. thick in the middle, margin thin, narrow, light-yellow (when fresh) and closely adnate. Pores small, round, extending down to the underlying wood. Spores ferruginous, sub-globose, 4–5μ diam.

Mucronoporus fulvidus E. & E.

On dead limbs of *Alnus,* Berkeley, Cala., Jan., 1894 (W. C. Blasdale, No. 181).

Resupinate, adnate, tawny-yellow, extending along the limb for 6–8 or more centimeters and 3–4 cm. wide, margin velvety tomentose, narrow, sterile, adnate. Pores short (1 mm. or less), round, extending down to the matrix without any distinct subiculum. Spores hyaline, sub-globose, about 2μ diam. Spines tolerably abundant, 25–35 x 3–4μ, rather pale.

Has the aspect of *Poria inermis* E. & E., but surface of pores more uneven, and spiny within.

Hydnum Washingtonianum E. & E.

On the ground in deep coniferous woods, Tracyton, Kitsap Co., Wash., Dec., 1893 (Adella M. Parker, No. 214).

About 4 cm. high, pale orange, carnose, subviscose. Stipe central, 3 mm. thick, subattenuated below. Pileus about 4 cm. across, slightly depressed in the center, thin, glabrous, wrinkled when dry. Aculei subulate, cylindrical, 3–5 mm. long, pale yellow, nearly white when fresh, decurrent half way down the stem. Spores angular-globose, (white)?, 6–7μ diam., borne on clavate-cylindrical basidia 20–22 x 6μ, with 4 erect, slender sporophores about 6μ long.

From *H. repandum,* to which it is closely allied, it differs in its decurrent aculei and tougher substance.

Tremellodon pusillum E. & E.

On rotten wood, among coniferous trees, Tracyton, Wash., Dec., 1893 (Adella M. Parker, No. 212).

Small, stipitate, gelatinous, white and nearly transparent. Pileus subreniform, membranaceous, 1–1½ cm. across, smoky-brown above and sparingly clothed with weak, pale hairs. Teeth not crowded, white, subcompressed, about ½ mm. long, narrowed gradually from the base, with a few obtuse, short, lateral, tuberculiform branches or processes. Spores ovate-globose, 5–6 x 3½–4μ, consisting of a thin, transparent sack containing a single, large globose nucleus. Stipe lateral, cylindrical, slender, equal, hirto-pubescent, 1 cm. long, 2 mm. thick, smoky-brown.

T. hirneoloides B. & C. is a much coarser, stouter plant, with stipe 18 mm. long, 8 mm. thick at the base.

Coniophora capnoides E. & E.

On bark of dead maple, London, Canada, Sept., 1892 (Dearness, No. 2,004).

Very thin, purplish, margin of the same color, much resembling outwardly, *Corticium fumigatum,* Thum., only not at all cracked and of a darker color. Spores brownish, smooth, globose, 3–3½μ diam., or short elliptical, 3½–5 x 3–3½μ,. borne singly on the apices of short, brown basidia or rather emitted successively from these basidia, in which several spores already formed may be distinctly seen. The subhymenial hyphæ are very scanty, and the bark has the appearance of having been for some time exposed to smoke.

Peniophora Atkinsoni E. & E.

On bark of some deciduous tree, Syracuse, N. Y. (Prof. Geo. F. Atkinson).

Closely adnate, thin, smoky-lilac, or smoky-drab color, surface uneven, 1–3 cm. across. Cystidia subulate-cylindrical, slightly roughened above, 30–40 x 5–7μ, projecting above the hymenium 12–20μ. Spores hyaline, compressed, elliptical when viewed in front, 4–5 x 2–3μ, suballantoid when seen edgewise, 4–5 x 1¼–1½μ.

Corticium alboflavescens E. & E.

On dead, standing trunk of *Kalmia latifolia,* Nuttallburg, W. Va., Feb. 1894 (L. W. Nuttall, No. 365).

At first orbicular, subpezizoid, 1–2 mm. diam., becoming more irregular in shape and 1 cm. or more diam., lower stratum milk-white, consisting of loosely interwoven, branching threads, and extending out beyond the pale-olivaceous or yellowish, membranaceous hymenium so as to form a thin subfimbriate, white margin. Spores abundant, globose, with a single large nucleus, 4–6μ diam., slightly colored.

The hymenium has only a slight tinge of olive and is perhaps better described as light-drab color.

Dacryomyces flabella E. & E.

On a decaying stump, Mercer Island, near Seattle, Wash., Nov., 1893 (Adella M. Parker).

Fan-shaped, deep orange color, gelatinous, 1½–2 cm. broad and high, with a short, lateral stipe, suberect with the opposite margins incurved so as to bear some resemblance to *Peziza onotica* Pers., subtuberculiform, or otherwise irregular in shape when young.

Spores oblong-cylindrical, with an oblique apiculus below, obtuse and rounded above, yellowish, about 7-septate, 15–18 x 6μ, about the same as in *D. stillatus*, from which its fan-shaped form and lateral stipe will readily distinguish it.

* * PYRENOMYCETES.

Capnodium caespitosum E. & E.

On living leaves of *Photinia Japonica*, Pasadena, Cala., July, 1894 (Prof. A. J. McClatchie, No. 748).

Perithecia subulate-cylindrical, simple or branched, 300–400 x 60–70μ, collected into compact, convex-hemispherical clusters 1–3 mm. diam., scattered over the upper surface of the leaf and bristling with the projecting points of the perithecia. There is no mycelium spreading over the surface of the leaf, only a few erect, moniliform threads mingled with the perithecia. Sporidia (sporules)? ovate, 3-septate and sub-hyaline at first, finally submuriform and dark-brown, 12–20 x 7–10μ. We have not been able to make out the asci with any certainty.

Nectria pallida E. & E.

On dead bark of *Carya alba*, Missouri, Oct., 1891 (C. H. Demetrio, No. 276 partly).

Stroma mucedinous, white, forming small (½–1 mm.) white tufts, or subeffused. Perithecia 6–20 on a stroma, globose or slightly ovate-globose, minutely pulverulent, about 150μ diam., pale-yellow, with the ostiolum obscure. Asci clavate-cylindrical, sub-sessile, 40 x 6–7μ, paraphysate?. Sporidia biseriate or obliquely uniseriate, oblong-fusoid, 3–4-nucleate, hyaline, apparently becoming uniseptate but not constricted, 6–8 x 2–2½μ.

Sometimes the perithecia stand singly or 2–3 together on scattered shreds of the white, mucedinous stroma.

Venturia vaccinii E. & E.

On dead leaves of *Vaccinium ovatum*, Seattle, Wash., Dec., 1893 (C. V. Piper, No. 225).

Perithecia hypophyllous, scattered, astomous, globose, 80–100μ diam., rather sparingly clothed with stout, straight, black spines 30–60μ long. Asci lanceolate, 25–35 x 6–7μ, 8-spored. Sporidia biseriate, fusoid, hyaline, subinequilateral, faintly uniseptate, 10–12 x 2–2½μ.

Chaetomium pallidum E. & E.

On an old yeast-culture, made on a piece of carrot, London, Canada, March, 1893 (J. Dearness, No. 2,245).

Perithecia superficial, thin membranaceous, pale, ovate, 150–200μ diam., with a conic-papilliform ostiolum. Asci not distinctly made out, but judging from the arrangement of the sporadia, oblong-clavate 30–35 x 10–12μ. Sporidia biconical, brown, becoming nearly opake, 14–18 x 10–12μ, narrowed and obtusely apiculate at the ends.

Differs from the usual type of *Chaetomium* in its pallid perithecia sparingly clothed with spreading white hairs, but by exposure and age the color of the perithecia becomes darker.

Lasiosphæria hystrix E. & E.

On decaying limb of *Salix*, Ohio (Morgan, No. 1,021).

Perithecia gregarious, depressed-hemispherical, ⅓–½ mm. diam., clothed all over except the broad, tuberculo-papilliform ostiolum, with straight, spreading, stout, snuff-brown hairs 100–250μ long and 6–7μ thick at the base. The matrix is also overrun with a subiculum of finer, interwoven, branching hairs. Asci clavate-cylindrical, short-stipitate, paraphysate, 8-spored, 120–160 x 20μ. Sporidia lying parallel in the asci, fusoid-cylindrical, hyaline, multinucleate, becoming 7–15-septate, nearly straight, ends obtuse, 45–65 x 8–10μ.

Comes nearest *L. caesariata* C. & P., but that is black and shining and beset with scattered, black hairs; it also has smaller 5–7-septate sporidia.

Rosellinia limoniispora E. & E.

On dead leaves of *Fraxinus*, Rockport, Kansas, Aug., 1894 (E. Bartholomew, No. 1,545).

Perithecia gregarious, superficial, ovate, about ¾ mm. diam., often flattened or depressed above, clothed except the black, mammiform ostiolum, with a thin, pruinose-tomentose coat which soon disappears, leaving the surface minutely granular-roughened. Asci (p. sp.) 70–75 x 9μ, with a short stipe, 8-spored, paraphysate. Sporidia obliquely uniseriate, limoniform, (i.e., acutely elliptical), the ends submucronate, 12–15 x 7–8μ, dark-brown.

The absence of any subiculum, and the smaller differently shaped sporidia separate this from *R. medullaris* and *R. mastoidea.*

Rosellinia cæspitosa E. & E.

On dead limbs of *Celtis occidentalis*, Rockport, Ks., Nov., 1893 (Bartholomew, No. 1,252).

Perithecia densely gregarious or cespitose, minute (175–200μ diam.) ovate-globose, rough, with conical or conic-papilliform ostiolum. Asci cylindrical, 60–79 x 8μ when the sporidia lie obliquely, 75–90μ long when they lie end to end, paraphysate, 8-spored. Sporidia uniseriate, rather acutely elliptical, brown, continuous, 9–13 x 6–7μ.

Distinguished by its small, rough, clustered perithecia.

Rosellinia bicolor E. & E.

On rotten wood, Louisiana (Langlois).

Perithecia gregarious, hemispherical, black-brown, ½ mm. diam., thin and fragile, seated on a white subiculum of interwoven, branching hyphae. Asci cylindrical, 125–140 x 8μ, 8-spored, paraphysate. Sporidia uniseriate, broad-fusoid, subinequilateral, 3–4 nucleate, hyaline becoming brown, 20–23 x 6–7μ.

Perithecia only about half as large as in *R. morthieri* Fckl., and not flattened at the apex. Ostiolum minute, papilliform.

Rosellinia ostiolata E. & E.

On bark of *Ulmus Americana*, Rockport, Kansas, Apr., 1894 (Bartholomew, No. 1,429).

Perithecia scattered or subgregarious, superficial, ovate-globose, ¾ mm. diam., black, minutely granular-roughened, slightly narrowed at the base, with a stout, obtuse, short-cylindrical, or conic-cylindrical ostiolum. Asci clavate-cylindrical, 150 x 25μ, paraphysate, 8-spored. Sporidia rhomboid-elliptical, longitudinally rugose, brown, continuous, 25–38 x 20–22μ. Some of them smaller and subglobose, but this may be a deformity.

Rosellinia pinicola E. & E.

On a weather-beaten pine board, Rockport, Ks., Feb., 1894 (Bartholomew, No. 1,379).

Perithecia loosely gregarious, erumpent-superficial, ovate-globose, grayish-black, ¼ mm. diam. Ostiolum minute, papilliform, sometimes slightly compressed. Asci cylindrical, 60–65 x 4½μ, p. sp. 40–45μ long, paraphysate, 8-spored. Sporidia uniseriate, elliptical, 5–8 x 3–4μ, the shorter ones sub-globose, brown, 2–3-nucleate.

Differs from *R. ovalis*, Ell. in its smaller perithecia and sporidia.

Melanomma asterostomum E. & E.

On bark of beech roots, Granton, Ontario, Canada, Jan., 1894 (J. Dearness, No. 2,238).

Perithecia gregarious, ovate-conical, rough, black, ¼–⅓ mm. diam., with a conic-papilliform, often distinctly radiate-sulcate 4–5 cleft ostiolum. Asci clavate-cylindrical, 8-spored, paraphysate, p. sp. 45–50 x 8–10μ. Sporidia crowded-biseriate, oblong-fusoid, 3-septate, often constricted at the septa and one of the inner cells smaller, pale olivaceous-brown (nearly hyaline at first), 12–15 x 3–4μ.

Differs from *M. fuscidulum* Sacc., in the shape of the perithecia and very different ostiolum.

Melanomma moricolum E. & E.

Perithecia gregarious, scattered, semi-erumpent, sub-globose, ¼ mm. diam., with a minute papilliform ostiolum. Asci clavate-cylindrical, short stipitate, paraphysate, 8-spored, p. sp. 40–45 x 7μ. Sporidia biseriate, oblong-fusoid, slightly curved, sub-obtuse, yellowish-brown, 12–15 x 3–4μ, mostly not constricted, but when mature, some of them distinctly so.

Differs from *M. Mori* H. Fabre, in its much shorter asci and rather smaller biseriate sporidia.

On dead small limbs of *Morus*, Rockport, Kansas (Bartholomew, No. 1,447 partly).

Melanomma alpestre E. & E.

On dead twigs of *Arctostaphylos Nevadensis*, Mt. Paddo, Wash., July, 1886, Alt. 6,000–7,000 ft. (W. N. Suksdorf, No. 268).

Perithecia scattered, hemispherical, 1–1¼ mm. diam., carbonaceous, black, glabrous, superficial, flattened, with a minute papilliform ostiolum. Asci cylindrical, short-stipitate, paraphysate, 110–150 x 10–12μ. Sporidia overlapping-uniseriate, or (in the longer asci) lying end to end, oblong-cylindrical, obtuse, slightly curved, 3-septate, brown, 18–22 x 5–6μ.

One perithecium contained two distinct ascigerous nuclei, seeming to indicate that the outer, black shell described above as a perithecium, is in reality a stroma, but the material was too scanty to enable us to settle this point definitely and we have, therefore, referred the specc. to *Melanomma.*

Melanomma dealbatum E. & E.

On old decorticated, bleached and weather-beaten cottonwood logs, Rockport, Kansas, Feb., 1894 (Bartholomew, No. 1,369).

Perithecia scattered, erumpent-superficial, black, glabrous, ovate-globose, 200–225μ diam., at length more or less collapsing above. Ostiolum papilliform, minute. Asci oblong-cylindrical, short-stipitate, paraphysate, 75–110 x 10–12μ. Sporidia overlapping uniseriate, or more or less perfectly biseriate, obovate, hyaline, becoming pale-brown, 3-septate, 12–15 x 6–7μ.

Some of the perithecia are sub-elliptical.

Differs from *M. obliterans* B. & Br. in its habitat (on wood of deciduous tree), and its constricted sporidia; from *M. Catillus* Sacc. in the character of the sporidia and smaller perithecia, nor does it seem referable to any other species with 3-septate sporidia.

Trematosphæria vitigena E. & E.

On old, decaying wood of *Vitis rupestris*, Nuttallburg, West Va., Apr., 1894 (L. W. Nuttall, No. 454).

Perithecia gregarious, sunk in the wood all except the obtuse, convex apex, ½–¾ mm. diam., depressed-globose, the buried part rather thin-walled, the erumpent, convex apex thick, solid, like the stromatic shield of *Clypeosphæria*. Ostiolum papilliform, soon perforated. Asci clavate-cylindrical, paraphysate, 8-spored, 86–100 x 10–12μ. Sporidia sub-biseriate, fusoid-oblong, 3-septate, and constricted, sub-acute, pale-brown, 20–25 x 6–7μ.

Trematosphæria Fraxini E. & E.

On dead limbs of *Fraxinus viridis* that had lain for some time in water, Rockport, Kansas, Feb., 1894 (Bartholomew, No. 1,373),

Perithecia scattered, semi-erumpent, small, elliptical (on a horizontal section), 300–500 x 250–300μ, the base sunk nearly to the wood, the erumpent apex closely embraced by the epidermis. Ostiolum papilliform, soon deciduous and then, perithecium perforated. Asci clavate, short-stipitate, paraphysate, 70–80 x 12–15μ, 8-spored. Sporidia overlapping below, biseriate above, fusoid-oblong, brown, 3-septate and constricted at all the septa, often with one cell swollen, slightly curved, 20–27 x 6–8μ.

The specc. of *Sphæria melina* B. & Br. in Rab. F. E., 1835, have perithecia ovate-conical, ½–1 mm. diam. and sporidia uniseriate, 4–6-nucleate, not constricted, straight, 22–30 x 12–15μ and are certainly different from this.

Teichospora (Teichosporella) Ohiensis E. & E.

On hard wood, Ohio (Morgan, No. 1,012).

Perithecia densely gregarious, superficial, grayish-black, rough, ovate-globose, 300–400μ diam, with a broad papilliform, soon perforated ostiolum. Asci cylindrical, short-stipitate, 55–62 x 7–8μ, 8-spored (paraphysate)? Sporidia uniseriate, short-elliptical, yellowish-hyaline, obscurely 1–3-septate and muriform, 10–12 x 6–8μ.

Has the general aspect of *Rosellinia pulveracea* (Ehr.).

Teichospora tuberculata E. & E.

On wood of *Liriodendron*, Ohio (Morgan, No. 1,004).

Perithecia gregarious, superficial, minute, about 300μ high and 200μ broad, ovate-conical, sessile on the flattened base, coarsely tubercular-roughened, black. Ostiolum obtuse, perforated and often 4-sulcate-cleft. Asci clavate-cylindrical, short-stipitate, 110 x 20μ, paraphysate, 8-spored. Sporidia irregularly biseriate, oblong-elliptical, multiseptate and muriform, hyaline at first, tardily becoming brown, slightly constricted in the middle, 19–22 x 11–13μ, ends obtuse.

Distinguished from the other species by the ovate-conical, tubercular-roughened perithecia.

Teichospora amygdaloides E. & E.

On bark of *Salix amygdaloides*, Rockport, Ks., July, 1894 (Bartholomew, No. 1,507).

Perithecia scattered or sub-gregarious, erumpent-superficial, subglobose, 250–350μ diam., soon flattened above and at length more or less collapsed. Ostiolum papilliform. Asci subventricose, subsessile, paraphysate, 8-spored, 75–85 x 18–21μ. Sporidia mostly crowded-biseriate, obovate, about 5-septate and constricted in the middle, with a longitudinal septum running through 2 or more cells, hyaline and uniseptate at first, finally yellow-brown, 20–22 x 10–13μ.

Differs from *T. obducens* (Pers.) in its scattered growth, sub-collapsing and mostly rather smaller perithecia, and shorter asci with crowded sporidia.

Teichospora clavispora E. & E.

On bark of *Negundo aceroides*, Rockport, Kansas, July, 1894 (Bartholomew, No. 1,509).

Perithecia scattered, erumpent-superficial, ovate-globose, rough, 250–300μ diam., with a papilliform ostiolum. Asci clavate-cylindrical, 100–120 x 14–15μ, paraphysate, 8-spored. Sporidia obliquely uniseriate, clavate or narrow obovate, 8–10-septate and muriform, brown, 30–35 x 10–12μ, narrowed almost to a point below.

Teichospora rhypodes E. & E

On decorticated *Rhus*, Ann Arbor, Mich., Apr., 1893 (L. N. Johnson, No. 1,545).

Perithecia gregarious, erumpent-superficial, conic-hemispherical, ⅓ mm. diam., with a papilliform or conic-papilliform ostiolum. Asci cylindrical, 100–110 x 12μ, paraphysate, 8-spored. Sporidia uniseriate, oblong-elliptical, yellow-brown, 6–7-septate, with a more or less perfect longitudinal septum running through several of the cells, 15–18 x 7–8μ, slightly constricted in the middle, ends obtusely pointed. Accompanied by pycnidial perithecia (*Macrophoma rhoina* E, & E.), smaller and depressed, with fusoid-oblong, hyaline sporules 18–22 x 6–7μ.

The ascigerous perithecia are more or less covered below with the remains of the decomposing fibers of the wood and have a dirty look.

Teichospora crossota E. & E.

On the weathered inner surface of elm bark, Rockport, Kansas, Apr., 1894 (Bartholomew, No. 1,437).

Perithecia gregarious, erumpent-superficial, ovate-globose, rough, black, 150–200μ, diam., fringed around the base with short, creeping, brown hyphæ, not collapsing. Ostiolum papilliform. Asci cylindrical or clavate-cylindrical, about 75 x 10–12μ, abruptly contracted below into a short, crooked stipe, paraphysate, 8-spored. Sporidia sub-biseriate, obovate-elliptical, yellow-brown, 3-septate and more or less constricted in the middle, 12–15 x 8–9μ, ends obtuse.

Allied to *T. pygmœa* E. & E., but perithecia gregarious and fringed, and sporidia longer and acute below.

Teichospora piriospora E. & E.

On outer bark of living *Fraxinus viridis*, Rockport, Ks., March, 1894 (Bartholomew, No. 1,233).

Perithecia erumpent-superficial, subglobose, ¾ mm. diam., with a papilliform ostiolum. Asci cylindrical, 100–110 x 15–18μ, sub-sessile, paraphysate, 8-spored. Sporidia overlapping-uniseriate, piriform, 6–11-septate and muriform, yellow-brown, 35–45 x 12–15μ, the terminal cells a little paler.

Teichospora nubilosa E. & E.

On outer bark of *Celtis occidentalis*, Rockport, Kansas, Nov. 1893 (E. Bartholomew, No. 1,249).

Perithecia scattered, superficial, ovate, minute, 250x220μ, rough, black, with a papilliform ostiolum, at length collapsing above. Asci clavate-cylindrical, 70–75 x 10–12μ, 8-spored, with filiform paraphyses. Sporidia uniseriate, elliptical or ovate, 3-septate and submuriform, constricted at the middle septum, hyaline at first, but soon becoming brown.

The perithecia are mostly seated on a thin, black crust which overspreads the surface of the bark, giving it a clouded appearance.

Pleosphæria corticola E. & E.

On outer bark of *Pinus rigida*, Nuttallburg, West Va., June, 1894 (L. W. Nuttall).

Perithecia scattered, superficial, ovate, 300–400μ diam., carbonaceo-membranaceous, pilose-strigose, hairs 100–200 x 5–6μ, soon opake, very faintly and sparingly septate, here and there collected into closely compacted fascicles resembling stout bristles. Ostiolum papilliform, obtuse. Asci oblong-cylindrical, abruptly short-stipitate, 80–100 x 20–25μ. Paraphysate? Sporidia crowded, acutely elliptical, nearly hyaline at first, becoming olive-brown and 5–7-septate and muriform, but not constricted.

Comes near *P. strigosa* Sacc., but perithecia rather smaller, not depressed, and hairs fasciculate.

Lophiostoma (Lophiosphæra)? asperum E. & E.

On outer bark of *Ulmus Americana*, Rockport, Kansas, June, 1894 (Bartholomew, No. 1,487).

Perithecia scattered, superficial, ovate, tubercular-roughened, except around the prominent, narrow, compressed ostiolum, 400–450μ high, 300–350μ broad, slightly narrowed around the base. Asci clavate-cylindrical, short-stipitate, 90–100 x 12μ, paraphysate, 8-spored. Sporidia uniseriate, mostly overlapping or oblique, yellowish-hyaline, uniseptate and constricted, 18–21 x 7–8μ, ends subacute, or when free obuse and rounded.

Lophiostoma speciosum E. & E.

On bark of *Fraxinus viridis*, Rockport, Kansas, March, 1894 (Bartholomew, 1,406).

Perithecia scattered, erumpent-superficial, globose, grayish-black,

¾ mm. diam., with a narrow, compressed, deciduous ostiolum. Asci clavate-cylindrical, 150–200 x 22–25μ, p. sp. 112–130μ long, paraphysate, 8-spored. Sporidia biseriate, oblong-elliptical, with the ends subacute, olive-brown. 10–11-septate, not constricted, 40–55 x 13–16μ.

Lophidium pachystomum E. & E.

On outer bark of *Populus monilifera*, Kansas (Bartholomew).

Perithecia gregarious, erumpent-superficial, depressed-globose, ¾–1 mm. diam., base slightly sunk in the bark, rounded above at first and without any visible ostiolum, but finally with a stout, short-cylindrical, obtuse, scarcely compressed ostiolum ¼–½ mm. long. Sometimes two or three perithecia are confluent. Asci clavate-cylindrical, 110–120 x 18–22μ (p. sp. 100–110μ), paraphysate, 8-spored. Sporidia biseriate, clavate-oblong or obovate-clavate, 27–50 x 12–15μ, 6–12-septate and muriform, becoming dark-brown, sometimes shriveled and deformed.

Distinguished by its turret-like ostiolum.

Lophidium nitidum E. & E.

On dead shoots of cultivated grapevines, Nuttallburg, West Va., Jan. 1894 (L. W. Nuttall, No. 295).

Perithecia scattered, semierumpent, small (200–250μ diam.), black and shining, subhemispherical, the flattened base immersed in the bark. Ostiolum compressed, thin, narrow, sometimes obsolete. Asci cylindrical, short-(8–10μ) stipitate, about 100 x 10–12μ, paraphysate, 8-spored. Sporidia uniseriate, oblong-elliptical, yellow-brown, 5–7-septate with a longitudinal septum running through two or more cells, 19–22 x 8–10μ, ends mostly rounded and obtuse, not at all or only slightly constricted in the middle.

Lophidium purpurascens E. & E.

On old paper lying by the roadside, Ann Arbor, Mich., March, 1894 (L. N. Johnson, No. 1,564, partly).

Perithecia gregarious, on purplish spots, ovate, 400–450μ diam., the apex emergent and crowned with the obtuse, compressed ostiolum. Asci clavate-cylindrical, 100–150 x 15–20μ, p. sp. 80–100μ long, paraphysate, 8-spored. Sporidia biseriate above, oblong or fusoid-oblong, attenuated towards each end, 7–10-septate, slightly curved, not at all or only slightly constricted, 2 or more of the cells divided by a longitudinal septum, olive-brown, 22–25 x 8–10μ.

Often in some of the asci the sporidia appear shriveled and are nearly opake.

Lophidium confertum E. & E.

On decorticated, decaying limbs of *Fraxinus viridis*, Trego Co., Kansas, Apr. 1894 (Bartholomew, No. 1,457).

Perithecia crowded, superficial, with the base broadly adnate, conical, somewhat shining above, 300–400μ diam. Ostiolum obtusely conical, mostly more or less compressed, with the opening elongated subhysteriform. Asci clavate-cylindrical, 100–110 x 12–15μ, with a short, crooked stipe and abundant paraphyses. Sporidia uniseriate, short-elliptical, pale yellow-brown, 3-septate, obtuse, more or less constricted at the middle septum, coarsely muriform, 12–15 x 10–12μ. Sometimes the sporidia are smaller and darker with a shriveled look. On account of the slightly compressed ostiola this approaches *Teichospora.*

Cucurbitaria borealis E. & E.

On bark of dead limbs of *Salix* sp., Alcove, N. York (C. L. Shear, No. 216).

Perithecia cespitose, 6–12 together in compact groups, 2–3 mm. diam., seated on the surface of the inner bark and loosely surrounded by the ruptured and upturned epidermis, ⅓–½ mm. diam., black, rough, subglobose, with a prominent ostiolum soon perforated. Asci cylindrical, short-stipitate, paraphysate, 8-spored, 90–110 x 15–16μ. Sporidia uniseriate or subbiseriate above, elongated ovate-elliptical, about 7-septate and muriform, somewhat constricted in the middle, yellow-brown, obtuse, 20–27 x 12–14μ.

Differs from *C. salicina* Fckl. in its cespitose perithecia and larger, 7-septate sporidia.

Sphærella hypsicola E. & E.

Perithecia scattered or subgregarious, ovate-globose, 80–90μ diam., subcuticular or superficial by the falling away of the epidermis, pierced above with a small round opening. Asci oblong, sessile, fasciculate, 25–35 x 7–8μ, 8-spored. Sporidia crowded-biseriate, oblong or clavate-oblong, scarcely constricted, hyaline, 9–11 x 2½–3μ.

On dead stems of *Trollius laxus*, Cameron Pass, N. W. Colo., July, 1894, alt. 10,200 ft. (Prof. C. S. Crandall, No. 4).

Sphærella coerulea E. & E.

On dead stems of *Aquilegia cœrulea*, Junction of Big South and

Cache la Poudre Rivers, Colo., July, 1894 (Prof. C. S. Crandall, No. 11), alt. 9,000 ft.

Perithecia evenly scattered, subcuticular but prominent, depressed-hemispherical, 100–120μ diam., pierced above. Asci fasciculate, aparaphysate, oblong, mostly broader near the base, sessile, 8-spored. Sporidia 2–3-seriate, crowded, clavate-oblong, obtuse, uniseptate and slightly constricted at the septum, 15–20 x 3½–4½μ.

Differs from *S. Aquilegiæ* E. & G. in its depressed perithecia and narrower sporidia.

Didymella Myricæ E. & E.

On dead twigs of *Myrica cerifera*, Kiamensie, Del., July, 1894 (Commons, No. 2,503).

Perithecia scattered, adnate-superficial, depressed-hemispherical, 100–120μ diam., with a papilliform ostiolum. Asci obovate, subinequilateral, sessile, aparaphysate, 40 x 20μ. Sporidia biseriate, oblong, hyaline, uniseptate and strongly constricted at the septum, ends obtuse, each cell 2-nucleate, 20 x 6–8μ. The cells easily separate.

Didymella Physocarpi E. & E.

On dead limbs of *Physocarpus opulifolius*, Nuttallburg, West Va., May, 1894 (L. W. Nuttall, No. 488).

Perithecia gregarious, covered by the pustuliform epidermis, about ¼ mm. diam., white inside, depressed-globose, the papilliform ostiolum barely penetrating the epidermis. Asci clavate-cylindrical, short-stipitate, 85–90 x 10–12μ, paraphysate, 8-spored. Sporidia biseriate, fusoid, 4-nucleate, uniseptate, constricted at the septum, hyaline, 19–22 x 4–5μ, mostly a little curved.

Didymosphæria populifolia E. & E.

On fallen leaves of *Populus angulata*, Shore of Lake Huron, Ontario, Canada, May, 1894 (Dearness, No. 2,263).

Perithecia gregarious, in suborbicular, hypophyllous groups, about 1 cm. across, not on any definite spots, 80–100μ diam., innate, only the subconoid, minute ostiolum projecting. Asci cylindrical, short-stipitate, 65–75 x 8–10μ, 8-spored (paraphysate)? Sporidia uniseriate, oblong, pale brown, uniseptate, slightly constricted, upper cell a little broader, 12–14 x 3½–4½μ.

Pleospora Richtophensis E. & E.

Perithecia thickly scattered, subcuticular, globose or elliptical, 300–400μ diam., finally more or less collapsing, the papilliform ostiolum barely piercing the epidermis. Asci clavate-oblong, short-stipitate, paraphysate, 8-spored, 85–110 x 20–22μ. Sporidia biseriate, oblong-elliptical, 5-septate and muriform, mostly constricted in the middle, yellow-brown, end cells paler and subacute, 25–35 x 12–14μ.

On dead stems of *Helianthus*, Mt. Richtophen, N. W. Colo., July, 1894 (C. F. Baker, No. 238).

Pleospora alpestris E. & E.

On decaying stems of *Trollius laxus*, Cameron Pass, N. W. Colo., July, 1894 (Prof. C. S. Crandall, No. 4, partly).

Perithecia scattered, innate-erumpent, ovate-globose, 250μ diam., with a papilliform ostiolum. Asci thin, evanescent, 150 x 25–30, 2-spored (in the specc. examined). Sporidia oblong-elliptical, or ovate-oblong, 50–65 x 16–24μ, mostly a little constricted in the middle, multi-(9–12-) septate and muriform, deep yellow-brown.

The perithecia have a scanty fringe of coarse, brown, mycelial threads around the base.

This differs from *Pl. polyphragmia* Sacc. in its smaller glabrous perithecia not collapsing, and its larger sporidia with fewer septa.

Pyrenophora Canadensis E. & E.

On sheaths of *Phleum pratense*, London, Canada, July, 1894 (J. Dearness).

Perithecia scattered, buried with the apex erumpent, ovate, 250–300μ diam., the apex, around the scarcely prominent ostiolum loosely clothed with spreading, brown, continuous hairs 50–80 x 5–6μ. Asci cylindrical, 150–190 x 28–32μ (p. sp. 110–120μ). Paraphyses not seen. Sporidia 4–8, oblong-elliptical or ovate-elliptical, nearly hyaline, obtuse, 3-septate, scarcely constricted, when mature one or two of the cells divided by a longitudinal septum, 40–55 x 15–20μ.

Leptosphæria sambucina E. & E.

On dead *Sambucus melanocarpa*, Cameron Pass, Colo., alt. 10,000 ft., July, 1894 (C. F. Baker).

Perithecia buried, ovate-globose, 350–400μ diam., raising the epidermis into pustules which are whitish at first with the minute, black, papilliform ostiolum visible in the center. Asci clavate-cylindrical, 100–120 x 12μ, paraphysate, 8-spored. Sporidia fusoid-cylindrical, slightly curved, uniseptate and constricted at first, finally

6-septate and constricted at the septa, generally with one cell near the middle, swollen, 22–27 x 6–7μ, golden-yellow.

Differs from *L. agnita* Desm. in its broader, golden-yellow sporidia. *L. Sambuci* in Roum. F. Gall. 5960, has 3-septate sporidia.

Leptosphæria papyricola E. & E.

On old pasteboard lying by the roadside, Newfield, N. J., Aug. 1894.

Perithecia gregarious, buried, with the acutely conical ostiolum erumpent, 110–130μ diam., ovate-globose. Asci (p. sp.) 60–70 x 5μ, with a slender stipe 30–40μ long, paraphyses obscure. Sporidia biseriate, fusoid, dull yellow, slightly curved, 3-septate, often constricted at the middle septum with the next cell above swollen, 14–20 (mostly about 15) x 2½–3μ.

Differs from any form of *L. eustoma* (Fr.) in its conical ostiolum and constantly narrower sporidia.

An *Ophiobolus* with asci 110–120 x 5μ, sporidia filiform 80–110 x 1½μ, also occurs on the same matrix.

Ophiobolus fragilisporus E. & E.

Perithecia scattered, erumpent-superficial, ovate-conical, brownish-black, 350–450μ high, 300–350μ thick, narrowed above into the prominent-papilliform or short-cylindrical, black ostiolum. Asci linear, gradually narrowed below, 150–200 x 5–5½μ. Paraphyses filiform, evanescent. Sporidia nearly as long as the asci, yellowish-brown, 1–1¼μ thick, readily separating into joints 8–12μ long.

Allied to *O. rudis* (Riess.), but sporidia only half as thick and perithecia ovate-conical.

On dead herbaceous stems, on overflowed land, Walton Creek, Colorado, July, 1894, alt. 6,500 ft. (Prof. C. S. Crandall, No. 40).

Linospora Brunellæ E. & E.

On living leaves of *Brunella vulgaris*, Columbia River, W. Klikitat Co., Wash., Apr. 1886 (W. N. Suksdorf, No. 267).

Perithecia thickly scattered, amphigenous, buried in the substance of the leaf, but raising the epidermis into little black tubercles about ⅓ mm. diam., and pierced above by the papilliform or short-cylindrical ostiolum. Asci clavate-cylindrical, 80–90 x 12–15μ, 8-spored, (paraphysate)? Sporidia fasciculate, lying parallel, clavate-cylindrical, yellowish-hyaline, 3-septate, not constricted, 55–65 x 3μ.

Hypospila Brunellæ E. & E.

On leaves of *Brunella vulgaris*, Seattle, Wash., Sept. 1892 (C. V. Piper).

Perithecia buried in the substance of the leaf, ½ mm. diam., the base hemispherical-prominent below, the conic-papilliform ostiolum erumpent through the slightly tubercular-elevated epidermis above. Asci clavate-cylindrical, 90–110 x 12μ, 8-spored, with filiform paraphyses. Sporidia cylindrical, crowded, nearly straight, faintly 1–3-septate, obtuse, 55–62 x 3½–4μ.

Anthostomella hypsophila E. & E.

Perithecia gregarious, buried in the bark, globose, black, ⅓–½ mm. diam., raising the surface of the bark into distinct pustules which are barely pierced by the papilliform ostiolum. Asci cylindrical, 90–110 x 12μ, paraphysate, 8-spored, stipitate. Sporidia uniseriate, narrow-elliptical, deep brown and finally opake, 15–18 x 8–10μ.

On dead stems of *Lonicera involucrata*, Cameron Pass, N. W. Colo., alt. 10,000 ft. (C. F. Baker).

Anthostomella suberumpens E. & E.

On inner surface of loosened elm bark, Rockport, Kansas, Nov. 1893 (Bartholomew, No. 1,244).

Perithecia gregarious, sunk in the bark, with the stout, conical ostiolum and often the apex of the perithecium erumpent, 250–320μ diam., with tolerably thick walls. Asci cylindrical, short-stipitate, 90–110 x 7–8μ, 8-spored, with filiform paraphyses. Sporidia uniseriate, elliptical, brown, becoming nearly opake, 12 x 6–8μ.

Distinguished from other species by its stout, conical ostiolum and suberumpent perithecia, approaching *Rosellinia.*

Diaporthe (Chorost.) stereostoma E. & E.

On dead branches of *Symphoricarpos occidentalis*, Rockport, Kansas, June, 1894 (Bartholomew, No. 1,482).

Stromata scattered or subconfluent, enclosed in a thin, black, subcarbonaceous crust, conical or subpulvinate, 1–3 mm. diam., seated on the wood and covered by the thin bark which is raised into pustules and pierced by the fascicle of stout, black, conic-cylindrical ostiola which are ½–1 mm. long. Perithecia 3–12 in a stroma, subglobose, about ⅓ mm. diam., slightly sunk in the surface of the wood which is marked by a cluster of shallow cup-shaped cavities when the perithecia are removed. Asci (p. sp.) 45–50 x 7–8μ, clavate-cylindrical, paraphysate, 8-spored. Sporidia biseriate, oblong, 3–4-nucleate, slightly constricted in the middle, obtuse, hyaline, 10–12 x 3½–4μ.

Very distinct from *D. Ryckholtii,* which is also found on *Symphoricarpos.*

Diaporthe (Chorostate) tetraptera E. & E.

On dead limbs of *Halesia tetraptera,* Nuttallburg, West Va., May, 1894 (L. W. Nuttall).

Stroma cortical, 1½–2 mm. diam., surrounded by a black line which does not penetrate the wood. Perithecia 4–12, circinate, ½ mm. diam., sunk to the wood and leaving their impress on its surface but not penetrating it. Ostiola obtusely rounded and perforated, erumpent in a compact fascicle and closely surrounded by the ruptured epidermis. Asci clavate-cylindrical, 75–80 x 12μ. Sporidia biseriate, oblong-fusoid, slightly curved, subobtuse, hyaline, uniseptate and constricted at the septum, each cell with a large nucleus, 19–22 x 5–7μ.

Differs from *D. Halesiæ* E. & E. in its smaller perithecia, not sunk in the wood and its much larger sporidia.

Diaporthe (Chorostate) Halesiæ E. & E.

On dead limbs of *Halesia tetraptera,* Nuttallburg, West Va., May, 1894 (L. W. Nuttall).

Perithecia 4–8, loosely circinate, ¾ mm. horn-color inside, becoming nearly black, sunk in the wood, necks converging with their obtuse, smooth, hemispherical ostiola erumpent in a close fascicle, closely surrounded by the ruptured epidermis. Asci slender, 55–60 x 6–7μ, short-stipitate. Sporidia subbiseriate, fusoid-oblong, hyaline, 2–4-nucleate, becoming uniseptate and slightly constricted, straight, 12–15 x 2½–3μ.

There is no distinct circumscribing line around the stroma, but the inner surface of the bark is uniformly blackened.

Diaporthe Araliæ E. & E.

On dead limbs of *Aralia spinosa,* Nuttallburg, West Va., Feb. 1894 (L. W. Nuttall, No. 312).

Stroma buried in the wood and circumscribed by a penetrating, black line, elliptical, about 5 x 4 mm. Perithecia buried in the stroma, few (6–10) globose, ½–¾ mm. diam., their short-cylindrical, ostiola projecting from a black, tubercular disk seated on the surface of the wood and perforating the pustuliform-elevated epidermis, but scarcely rising above it. Asci clavate-cylindrical, 40–45 x 5–6μ, paraphysate, 8-spored. Sporidia biseriate, oblong, 4-nucleate, becoming uniseptate and slightly constricted, hyaline, obtuse, 12–13 x 2½–3μ.

Allied to and resembling *D. ocularia* C. & E.

Valsa ribicola E. & E.

On dead *Ribes aureum*, Rockport, Kansas, Aug. 1894 (E. Bartholomew, No. 1,530).

Perithecia circinate, 10–12 buried in the unchanged substance of the inner bark, not penetrating to the wood or circumscribed by any black line, 230–250μ diam., ovate-globose, with slender necks converging, with their rounded, black, finally subumbilicate ostiola erumpent around the margin of a dirty white disk. Asci clavate-cylindrical, about 60 x 8μ. Sporidia biseriate above, allantoid, hyaline, obtuse, moderately curved, 12–15 x 3–4μ. The white disk is only the top of a grayish-white central column around the base of which lie the perithecia, in a circle 1½–2 mm. diam.

This cannot easily be mistaken for *V. ribesia* Karst., which has sporidia only about half as large and differs also in other respects.

Valsa Chionanthi E. & E.

On dead limbs of *Chionanthus Virginica*, Nuttallburg, West Va., March, 1894 (L. W. Nuttall, No. 228).

Perithecia 4–10, globose, ¼–⅓ mm. diam., buried in the unchanged substance of the bark, with convergent necks, terminating in short-cylindrical, obtuse, perforated ostiola erumpent in a close fascicle perforating and slightly raising the bark. Asci clavate, p. sp. 40–45 x 8–10μ, 8-spored, paraphysate? Sporidia allantoid, hyaline, 12–15 x 3½–4½μ, biseriate above.

Spermogonia (*Cytispora Chionanthi* E. & E.) buried in the bark, flask-shaped, ½–¾μ diam., multilocular, the cells soon confluent, the apex erumpent and perforated by a single pore. Sporules allantoid, 4–6 x 1–1¼μ, borne on basidia branched above, the branches erect, straight, nucleate, 7–10μ long.

Valsa Diospyri E. & E.

On dead limbs of *Diospyros Virginiana*, Nuttallburg, West Va., Dec. 1894 (L. W. Nuttall, No. 253).

Stroma consisting of the slightly blackened substance of the bark, convex, about 2 mm. diam., not circumscribed. Perithecia 4–10 in a stroma, subglobose, ¼–⅓ mm. diam., necks converging and united above in a small, black disk which perforates the pustuliform-elevated epidermis, but does not rise above it. Ostiola short, conic-cylindrical, with a smooth, round opening, crowded and finally obliterating the disk. Asci clavate-lanceolate, p. sp. 25 x 5μ, 8-spored, paraphysate. Sporidia allantoid, hyaline, 8–10 x 1½–2μ. Spermogonia (*Cytispora*) in the young stroma, multilocular gray inside, opening by a single, central pore. Spermatia allantoid, hyaline, moderately curved, 4–5 x 1¼μ.

Valsa etherialis E. & E.

On dead limbs of *Acer rubrum*, Nuttallburg, West Va., Feb. 1894 (L. W. Nuttall, No. 373).

Stromata cortical, thickly scattered, convex, 1–1½ mm. diam. Perithecia 6–12 together, circinate, buried in the unaltered substance of the bark, small, 150–250μ diam., their short necks terminating in an erumpent, compact fascicle of obtuse, black, slighly unbilicate ostiola closely embraced by the epidermis and scarcely rising above it. Asci (p. sp.) fusoid, 15–22 x 4–4½μ, stipitate, 8-spored. Sporidia biseriate, allantoid, hyaline, curved, slender, 5–6 x about 1μ. When well developed, the epidermis is raised into subdiscoid pustules in which the slight protuberances indicate the position of the subjacent perithecia.

V. delicatula C. & E. has fewer, larger perithecia and broader sporidia. *V. microspora* Cke. & Plowr. has also larger perithecia and yellowish sporidia, and the ostiola are more or less distinctly sulcate, indicating its close relationship to *Eutypella*. In *V. etherialis* the sporidia both in and out of the asci are perfectly hyaline.

Eutypella densissima E. & E.

On dead limbs of *Aralia spinosa*, Nuttallburg, W. Va., Feb. 1894 (L. W. Nuttall, No. 363).

Stromata scattered, cortical, depressed-conical, 2–3 mm. diam., not circumscribed, but staining the bark olive-gray. Perithecia numerous, often 50–70 in a stroma, 100–120μ diam., closely packed, their slender necks terminating in obtusely conical, 4-cleft, black, densely crowded ostiola erumpent in a brown disk surrounded by the ruptured epidermis. The disk is soon obliterated, so that only the crowded, black, subshining ostiola are seen. Asci clavate-fusoid, p.

sp. 25–30 x 4μ. Sporidia biseriate, allantoid, hyaline, moderately curved, 8–10 x 1½–2μ.

Eutypella carpinicola E. & E.

On dead limbs of *Carpinus Americana*, Alcove, N. Y., Oct. 1893 (C. L. Shear, No. 190).

Stromata cortical, flat, subconfluent, 1½–2 mm. diam., formed from the scarcely altered, superficial layer of the inner bark, below which the substance of the bark and surface of the wood is uniformly blackened. Perithecia subcircinate, 3–6 together, ½–⅔ mm. diam., with thick, coriaceous walls, their short necks erumpent in a small, flattened, tubercular, black disk, which pierces the papilliform-elevated epidermis, and appears like a small black speck on its surface. Ostiola erumpent through the disk, broad, flat, soon stellately cleft. Asci slender-clavate, p. sp. 40–50 x 5μ, or including the slender stipe, 80–100μ long, paraphysate, 8-spored. Sporidia biseriate, allantoid, yellowish, slightly curved, obtuse, 8–10 x 2μ.

The perithecia lie in the superficial layer of the inner bark, and when the epidermis is pulled off, this layer and the imbedded perithecia adhere to and come off with it. The perithecia are then seen to be surrounded by a thin white layer apparently formed from the substance of the bark.

Calosphæria cornicola E. & E.

On dead limbs of *Cornus asperifolia*, Rockport, Kansas, May, 1894 (Bartholomew, No. 1,470).

Perithecia scattered or loosely collected in subvalsiform groups of 3–5, minute, 200–250μ diam., buried in the unchanged substance of the inner bark, covered by the epidermis which is raised into little pustules and pierced by the papilliform ostiola. Asci clavate, 27–32 x 6–6½μ, rounded above and gradually narrowed to the base. Paraphyses linear, nucleate, much longer than the asci. Sporidia biseriate, cylindrical, hyaline, curved, obtuse, 10–12 x 2μ.

Differs from *C. minima* Tul. (also on *Cornus*) in its sporidia twice as long and rather broader. The scattered mode of growth is like that of *C. microtheca* C. & E.

Endoxyla acericola E. & E.

On rotten maple wood, Granton, Ontario, Canada, Jan. 1894 (Dearness, No. 2,235).

Perithecia scattered or subvalsiform-aggregated, globose, black, 300–350μ diam., entirely buried in the unchanged substance of the wood, their short-cylindrical or conic-cylindrical ostiola exserted either singly or in loose fascicles. Asci cylindrical, 130–140 x 12μ (p. sp. 90–110μ), paraphysate, 8-spored. Sporidia uniseriate, oblong-cylindrical, 3-septate and constricted at the septa, obtuse, not curved, brown, apparently roughish, 18–22 x 8–10μ.

Pseudovalsa viticola E. & E.

On dead shoots of *Vitis riparia*, Rockport, Kansas, April, 1894 (Bartholomew, No. 1,454).

Perithecia buried in the unchanged substance of the inner bark, either singly or 2–4 together, globose, soft, ½–¾ mm. diam., raising the epidermis into distinct pustules, which are pierced by the papilliform or tubercular-papilliform ostiolum. Asci cylindrical, short-stipitate, 8-spored, paraphysate, 100–120 x 10–12μ. Sporidia uniseriate, oblong-cylindrical, straight or very slightly curved, obtuse, 3-septate and slightly constricted, 15–20 x 8–9μ, light yellow-brown.

Valsaria allantospora E. & E.

On dead *Negundo aceroides*, Rockport, Kansas, April, 1894 (Bartholomew, No. 1,450).

Stroma cortical, elliptical (in a horizontal section), 4–7 x 3 mm., or subseriate-elongated for 1–2 cm., formed from the substance of the bark which becomes of a lighter color than the surrounding parts, and is limited by a black line which penetrates the wood to the depth of about 1 mm. Perithecia 6–12 in a stroma, globose, black, thick walled, not sunk in the wood, ¾–1 mm. diam. Ostiola erumpent, slightly projecting, conical, black, not sulcate, not crowded, connected by a thin, black crust. Asci clavate, short-stipitate, p. sp. 55–62 x 8–10μ (paraphysate)? Sporidia biseriate, cylindrical, slightly curved, yellowish and 2-nucleate at first, becoming brown and uniseptate, but not constricted, 12–15 x 3–3½μ.

Diatrype celastrina E. & E.

On dead stems of *Celastrus scandens*, Rockport, Kansas, May, 1894 (Bartholomew, No. 1,472).

Stromata scattered, cortical, light wood-color within, depressed-conical, 2–3 mm. diam., raising the epidermis into distinct pustules, ruptured above with a small, elliptical opening by the dark-gray disk. Perithecia 4–12 in a stroma, subcircinate, ovate, about ½ x ¾ mm. diam. Ostiola scattered or erumpent around the margin of the disk, flat, with an irregularly shaped opening. Asci clavate-cylindrical, 60–70x7–8μ (p. sp. 30–35μ long), paraphysate, 8-spored. Sporidia biseriate, cylindrical, smoky yellow-brown, slightly curved, obtuse, 10–12x2–3μ. Stroma circumscribed by a black line, which does not penetrate the wood. This can hardly be the *Sphæria dolosa* Fr., said by Schw. to occur on *Celastrus*. It is certainly different from the spec. so labeled in Sydow's Mycotheca Marchica.

Anthostoma formosum E. & E.

On bark of dead *Celtis occidentalis*, Rockport, Kansas, June, 1894 (Bartholomew, No. 1,492).

Stromata scattered, cortical, thick-convex, 2–4 mm. diam., orbicular or elliptical, formed from the scarcely altered substance of the bark. Perithecia 12–20 buried in the stroma but not penetrating to the wood, ovate-globose, with thick, cartilagino-membranaceous walls, black and shining inside, about 1 mm. diam., their slender necks converging, their stout, conic-cylindrical ostiola with smooth rounded tips, erumpent in a close fascicle and projecting, when fully developed for 1 mm. or more, or quite as often, merely raising and rupturing the epidermis, but scarcely rising above it. Asci cylindrical, stipitate, paraphysate, p. sp. 60–70x4–5μ. Sporidia uniseriate, oblong, dark brown (subhyaline and nucleate at first), straight, obtuse, 7–10x3–4μ.

Anthostoma microecium E. & E.

On dead limbs of *Asimina triloba*, Nuttallburg, West Va., Feb. 1894 (L. W. Nuttall).

Stroma cortical, faintly circumscribed, 1–1½ mm. diam., orbicular, convex. Perithecia 4–8 in a stroma, globose, minute (200–250μ), circinate, necks slender, short, converging, with the minute, papilliform ostiola erumpent in a small, black, hemispherical disk, which barely pierces the pustuliform-elevated epidermis, and is closely embraced by it. Asci cylindrical, 80–110 x 8–10μ, paraphysate 8-spored. Sporidia uniseriate, elliptical, brown, continuous, 2-nucleate, 12–14 x 6–7μ.

Distinguished by its very small stroma and perithecia.

Diatrypella prunicola E & E.

On dead limbs of *Prunus Pennsylvanica*, Alcove, N. Y., Feb. 1894 (C. L. Shear, No. 298, partly).

Stroma seated on the inner bark, convex-hemispherical, 3–4 mm.

diam., tobacco-color inside, not circumscribed, crowded above with the dense, flat-topped orbicular or elliptical fascicle of hemispherical, smooth, soon broadly and irregularly perforated ostiola, which raise and pierce the epidermis with an orbicular opening or oftener protrude through transverse cracks. Perithecia irregularly polystichous, small (110–150μ), black and shining inside, numerous, subglobose. Asci clavate-cylindrical, short-stipitate, 65–70 x 8–10μ, polysporous, paraphysate. Sporidia irregular crowded, yellowish in the mass, allantoid, 5–6 x 1μ.

Phyllachora asterigena E & E.

On living leaves of *Aster oblongifolius*, Rockport, Kansas, Aug. 1893 (Bartholomew, No. 1,040). (Stylospores.)

Forming orbicular or elongated, black patches, 2–6 mm. in extent, on the under side of the leaves. Stroma thin, gray inside, surface roughened by the prominent, conic-hemispherical, perforated ostiola. Ascigerous cells numerous, subglobose, about 100μ diam. Sporules oblong or cylindrical, hyaline, uniseptate, slightly constricted at the septum, obtuse, 15–25 x 4–4½μ.

This does not seem to be *Dothidea Haydeni*, B. & C., which is represented as growing on the stems and having "sporidia linear, attenuated at each end."

Dothidea Solidaginis Schw. has a different habit, stromata numerous, scattered, tuberculiform and mostly less than 1 mm. diam.

Hypoxylon occidentale E. & E.

On dead limbs and trunks. Pasadena, Cal. (Prof. A. J. McClatchie).

Stroma hemispheric-tuberculiform, superficial, sessile, 2–10 cm. diam., surface roughened by the large, hemispherical ostiola, and clothed with a thin coat of short, olivaceous hyphæ, bearing globose, ovate, or oblong-cylindrical conidia, nearly hyaline and continuous at first, finally pale brown and 1–3 septate, 4–15 x 4–5μ. Perithecia peripheral, 1–1¼ x ¾–1 mm. Asci cylindrical, 120–150 (p. sp. about 100) x 6–7μ, paraphysate, 8-spored. Sporidia uniseriate, oblong-elliptical, subinequilateral, olive-brown, 14–16 x 6–7μ.

Has the aspect of *Daldinia concentrica*, but not zonate within, the inner substance consisting of a compact mass of radiating, sooty black fibers with a silky luster. The species is allied to *H. malleolus* B. & R., from which it is distinguished by its more prominent ostiola not surrounded by any distinct annular depression, and by its broader sporidia and the presence of a conidial layer.

Hypoxylon Nuttallii E. & E.

On bark of dead *Magnolia Fraseri*, Nuttallburg, West Va., May, 1894 (L. W. Nuttall, No. 477).

Stromata gregarious, subconfluent, depressed-hemispherical or strongly convex, 3–6 mm. diam., purplish-black, mammillose. Perithecia small (about ¼ mm.), scattered irregularly through the stroma, which is rather soft and brownish within. Ostiola crowning the mammillose projections on the surface of the stroma, papilliform, soon deciduous, leaving a round perforation. The asci in the specc. examined had disappeared. Sporidia brown, oblong-elliptical, subinequilateral, 7–8 x 3–4μ (exceptionally 9 x 5μ).

Hypoxylon atroviride E. & E.

On bark of dead tree (*Betula* or *Quercus*), Nuttallburg, West Va., Dec. 1893 (L. W. Nuttall, No. 275).

Stroma pulvinate, 1–1½ cm. across, and about 4 mm. thick, orbicular, covered above with a thin (½ mm.) carbonaceous crust, which is soon covered by a dark green layer of the ejected spores, laterally and internally dirty umber color. Perithecia (which constitute the entire inner substance of the stroma) ovate compressed, and including the long, stout neck, about 3 mm. long and 1 mm. broad below. Ostiola papilliform, soon covered and obscured by the ejected sporidia. Asci cylindrical 100 x 3½–4μ (p. sp. 40–45 long), paraphysate, 8-spored. Sporidia uniseriate, oblong-elliptical, pale brown, under the microscope 2-nucleate, 4½–5½ x 2μ.

This is a well-marked species. The substance of the stroma, except the superficial, carbonaceous layer, is friable, and in this respect as well as the color resembles *H. Petersii* B. & C., from which, however, in other respects it is very distinct.

Hysterium cedrinum E. & E.

On weather-beaten wood of a white cedar post, Rockport, Ks., March, 1894 (Bartholomew, No. 1,422).

Scattered, erumpent, narrow-elliptical, minute (¼–½ mm.), black, subrugulose, not polished, lips thin, loosely closed, when fresh open exposing the dark-colored disk. Asci oblong, obtuse above, abruptly contracted below into a short stipe, 45–55 x 16–17μ, paraphysate, 8-spored. Sporidia biseriate, ovate-elliptical, 3-septate, scarcely or only very slightly constricted, obtuse at the ends, subinequilateral, 18–21 x 7–8μ, the cells uniformly brown, and each with a large nucleus.

Comes near *H. vulgare* De Not. and *H. ellipticum* Fr., but both of these have oblong sporidia, and the former has shining perithecia, besides their different habitat.

Hypoderma tunicatum E. & E.

On dead branches of *Arctostaphylos Nevadensis* Gray, Mt. Paddo, Wash., July, 1886 (W. N. Suksdorf, No. 268).

Perithecia oblong or lanceolate, prominent, 1–3 x ¾–1 mm., brownish-black, ends subacute, entirely closed at first, finally opening by an irregularly torn, longitudinal fissure along the top, exposing the pale disk. Asci clavate, 150–200 x 18–20μ, 8-spored, with filiform, branching paraphyses. Sporidia biseriate, hyaline, oblong-elliptical, slightly curved, 3-septate, and including the broad, hyaline envelope, 22 x 8–10μ, the septate body of the spore being about 20 x 3½–4μ.

On the tips of the branches was found *Melanomma alpestre* E. & E.

Hypoderma Cassandræ E. & E.

On dead stems and branches of *Cassandra calyculata*, Ann Arbor, Mich., April, 1893 (L. N. Johnson).

Perithecia scattered or gregarious, erumpent, elliptical or oblong, 1–1½ x ½–¾ mm., membranaceo-coriaceous, black, bordered by the ruptured and upturned epidermis, lips thin, incurved and closed when dry so as to hide the grayish-black disk, finally deciduous. Asci clavate, narrowed gradually below into a stipe-like base, 45–60 x 10–12μ above, rounded at the apex, paraphysate. Sporidia biseriate, oblong or oblong-elliptical, hyaline, mostly a little curved, obtuse, continuous, 10–16 x 4–6μ.

Not to be confounded with *Lophodermium* (*Cenangium*) *Cassandræ* (Pk.), which has much longer, linear or filiform sporidia.

* * * DISCOMYCETES.

Barlæa lacunosa E. & E.

On bark, Notre Dame Bay, Newfoundland, May, 1894 (Rev. A. C. Waghorne).

Sessile ½–1½ cm. broad, orange-color, hymenium deeply lacunose, yellowish-white outside and minutely tomentose, margin undulate and narrowly incurved. Asci cylindrical, p. sp. 70–90μ, 8-spored.

Paraphyses gradually thickened upwards, hyaline, 3–3½μ thick at the apex. Sporidia uniseriate, perfectly globose, hyaline, 8–10μ diam.

Comes near *B. epichrysea* Beck, but asci and sporidia smaller and hymenium lacunose.

Ciboria juncigena E. & E.

On dead stems of *Juncus*, Falcon Valley, Wash., May, 1883 (W. N. Suksdorf, No. 371).

Stipitate, shallow cup-shaped, thin, 4–5 mm. diam., glaucous-pruinose outside, disk wine-colored, subumbilicate. Stipe about 1 cm. long, 1 mm. diam. below, black and longitudinally wrinkled for about ⅔ the way up, flesh-color above, base flattened and attached to the culm but not penetrating it. Asci clavate-cylindrical, about 60 x 4–5μ, paraphysate, 8-spored. Sporidia subbiseriate, allantoid, slightly curved, hyaline, continuous, 7–8 x 1¼μ,

Ciboria Johnsoni E. & E.

N. A. F. No. 3,131.

Growing from decaying "thorn apples" (fruits of *Cratægus*), more or less buried in the ground, Ann Arbor, Mich., May, 1893 (L. N. Johnson, No. 626).

Stipe slender, 10–25 mm. long, subundulate, slightly enlarged above into the strongly concave, 3–8 mm. diam., light dirty brown ascoma. Asci cylindrical, short-stipitate, paraphysate, 8-spored. Sporidia uniseriate, mostly overlapping and oblique, sometimes subbiseriate, ovate-elliptical, subacute, hyaline, continuous, 8–10 x 4–5μ.

The disk in drying becomes grayish-white.

Lachnella rhizophila E. & E.

On decaying roots of *Rhus diversiloba*, Columbia River, W. Klikitat Co., Wash., Jan. 1894 (W. N. Suksdorf, No. 306).

Gregarious, subsessile, dirty white, cup-shaped and ½–1 mm. diam. when fresh, contracted and closed when dry, at first subglobose and nearly closed, outside clothed and margin fringed with straight, rough, pale brown (under the microscope), sparingly septate hairs 100–150 x 4μ. Asci cylindrical, short-stipitate, 8-spored. Paraphyses filiform, scarcely thickened above, about as long as the asci. Sporidia overlapping-uniseriate, or biseriate, fusoid, hyaline, 2–3-nucleate, 10–12 x 3μ.

The ascomata remain cup-shaped, with the margin erect. Disk pale, without any distinct shade of yellow.

Lachnella Virginica E. & E.

On decaying wood of *Magnolia Fraseri*, Nuttallburg, West Va., Feb. 1894 (L. W. Nuttall, No. 380).

Gregarious, sessile, ¾–1⅕ mm. diam. Disk pallid, concave, nearly closed when dry, margin fringed with brown, septate hairs, 100–125 x 3μ, outside clothed with shorter, reddish-brown hairs. Asci about 50 x 5μ, clavate-cylindrical, short-stipitate, paraphysate, 8-spored. Sporidia subbiseriate, oblong, 6–8 x 1½–2½μ.

Pseudohelotium laricinum E. & E.

On decaying needles of *Larix*, in a "Tamarack Swamp," Northfield, Mich., June, 1893 (L. N. Johnson, No. 657).

Ascomata sessile, thin, almost membranaceous, carnose, orange colored, flat-discoid, 3–5 mm. diam., darker outside and minutely pubescent, margin incurved when dry, beset with short, compound, conical processes formed by the prolongation of the cellular structure of the ascoma. Asci cylindrical, about 75–8μ, with filiform paraphyses, not thickened above, 8-spored. Sporidia uniseriate, oblong-elliptical, obtuse, hyaline, continuous, 8–10 x 4–5μ (mostly about 4μ).

In old, partly weathered specc. the color becomes a lighter orange.

Cyathicula alpina E. & E.

On dead stems of *Pedicularis*, and culms of *Elymus condensatus*, N. W. Colo., July, 1894, alt. 9,500 ft.

Minute, about ¾ mm. high, stipitate, ascomata, shallow cup-shaped when fresh, closed when dry, about ½ mm. diam., disk and margin pallid, structure fibrous, the extremities of the fibers prolonged and subfasciculate so as to make the margin of the ascoma obscurely dentate. Stipe about ¼ mm. high, whitish. Asci clavate-cylindrical, short-stipitate, with filiform paraphyses scarcely thickened at the apex. Sporidia oblong-cylindrical, hyaline, continuous, 8–10 x 1½–2μ. The outside of the cups is more or less farinose and becomes quite dark.

This is very near *Helotium nigrescens* Cke., which lacks the dentate margin, and has larger asci and sporidia, besides being much darker.

Mollisia Gaultheriæ E. & E.

On living leaves of *Gaultheria Shallon*, Seattle, Wash., Dec. 1893 (Adella M. Parker, No. 185, in part).

Spots large (1–2 cm.), orbicular, dirty brown, paler and purple margined above, sometimes irregular in shape and occupying the greater part of the leaf. Ascomata amphigenous, but more numerous below, superficial on paler parts of the spots, small (½ mm. diam.), dark liver-color (nearly black when dry), margin nodulose-dentate or subentire, glabrous, concave. Asci clavate-oblong, 45–55 x 10–12μ, with a short, nodular stipe and filiform, branched paraphyses. Sporidia biseriate, oblong, hyaline, continuous, 10–12 x 3–3½μ, ends obtuse.

Allied to *M. prinicola* E. & E., but differs in several respects.

Tapesia Coloradensis E. & E.

On bark of *Sambucus melanocarpa*, Cameron Pass, Colorado, July, 1894, alt. 10,000 ft. (C. F. Baker, 236, partly).

Ascomata scattered or subgregarious, sessile, seated on the epidermis or on the surface of the inner bark, 1–2 mm. diam., glabrous, nearly black outside, disk glaucous-white, or livid-white at first, becoming nearly black when dry, margin paler, thin and subundulate. Asci clavate-cylindrical, 45–55 x 8–10μ, narrowed below into a short, thick stipe, 8-spored, with stout but evanescent paraphyses. Sporidia biseriate, oblong-cylindrical, smoky-hyaline, often slightly curved, continuous, obtuse, 8–11 x 2½–3½μ.

The ascomata are surrounded by a thin, brown subiculum (more or less distinct), composed of slender pale brown, sparingly septate, interwoven hyphæ.

Allied to *T. fusca* (Pers.).

When dry the opposite sides of the ascomata roll together in a hysteriform manner.

Helotiella pygmæa E. & E.

On old cornstalks, Ohio (Morgan, No. 993).

Gregarious, minute, pallid, yellowish outside, sparingly clothed and margin fringed with pale slender hairs. When moist convex-discoid, ¼–⅓ mm. diam., pallid; when dry urceolate and yellowish, attached to the matrix by a central point and by light colored hairs. Asci (p. sp.) about 30 x 6μ (paraphysate?), 8-spored. Sporidia biseriate, fusoid-oblong, hyaline, 4-nucleate, becoming uniseptate, and sometimes slightly constricted, 10–14 x 3–3½μ.

Differs from *H. carnosula* Rehm in its smaller size and absence of any clavate paraphyses.

Helotiella papyricola E. & E.

On old paper lying by the roadside, Ann Arbor, Mich., March, 1893 (L. N. Johnson, No. 1,564, partly). Found also at Newfield, N. J.

Ascomata gregarious, sessile or contracted below into a very short stipe, pale orange, of a soft waxy consistency, discoid when fresh, and 200–300μ diam., subspherical and nearly closed when dry, outside, sparingly furfuraceous, margin fringed with short, spreading hairs. Asci oblong, very short-stipitate, obscurely paraphysate, 8-spored, 25–30 x 12μ, or elongated, 50–60 x 8μ. Sporidia biseriate, cylindric-fusoid, hyaline, slightly curved, subobtuse, 2–4-nucleate, becoming uniseptate, but not constricted, 12–15 x 3μ.

The paper is stained orange-red around the groups of ascomata.

Helotiella major E. & E.

On rotten wood, Ann Arbor, Mich., June, 1893 (F. E. Langdon, Comm. L. N. Johnson, No. 12).

Ascomata gregarious, often subconfluent, sessile, 1–2 mm. diam., dirty orange inside, dirty white outside and sparingly clothed (the whitish margin more densely so) with short, pale, glandular hairs, expanded when mature and fresh, margin incurved when dry, attached to the matrix by spreading, white filaments, which also form a thin subiculum when the ascomata are crowded. Asci oblong-cylindrical, sessile, paraphysate, 8-spored, 65–70 x 7–8μ. Sporidia mostly biseriate, oblong-cylindrical, slightly curved, hyaline, uniseptate, not constricted, 12–16 x 2½–3μ.

H. cornuta (Ell.) is much smaller and has the sporidia apiculate. *H. Nuttallii* E. & E., to which this is closely allied, is also smaller, with the ascomata of fibrous structure, and clothed with longer and much more abundant hairs. Occasionally a spore is 3-septate, but the texture of the ascomata is carnose, not waxy or coriaceous as in *Dermatella.*

Helotiella Nuttallii E. & E.

On rotten wood, Nuttallburg, West Va., March, 1894 (L. W. Nuttall, 397).

Ascomata gregarious, sessile, flat-hemispherical, ½–1 mm. diam., cup-shaped when fresh, contracted and subspherical when dry with only a small round apical opening, orange color throughout, disk watery orange, outside and fringed margin paler. Substance fibrous, the fibres prolonged above so as to make a marginal fringe of pale yellow, roughish, straight hairs. Asci clavate-cylindrical, sessile, curved 50–60 x 5–6μ. Paraphyses filiform, hardly thickened above, with a series of orange-colored, globose nuclei. Sporidia biseriate, oblong, hyaline, obtuse, uniseptate but not constricted, 8–10 x 2½–3μ.

The outside of the ascomata is slightly hairy so that the specc. might be referred to *Solenopeziza*, if that is really worthy of generic distinction.

Dermatella viticola E. & E.

On dead shoots of *Vitis* (cult.), Nuttallburg, West Va., Jan. 1894, (L. W. Nuttall, No. 295, partly).

Sessile, convex-discoid and pale when moist, concave and flesh-color when dry, and then scarcely projecting above the surface of the bark, ½–¾ mm. diam. Asci clavate-cylindrical, about 70 x 12μ, with filiform paraphyses, 8-spored, subsessile. Sporidia subbiseriate, oblong-elliptical, hyaline, 1–3-septate (3–4-nucleate at first), 15–18 x 6–6½μ.

Belonium arabicolum E. & E.

On dead stems of *Arabis furcata*, Mt. Paddo, Wash., alt. 6–7,000 ft., July, 1886 (W. N. Suksdorf, No. 347).

Ascomata erumpent-superficial, sessile, orbicular, black, 300–400μ diam., subdiscoid, marginate. Asci clavate, 80–100 x 9–10μ, with filiform paraphyses broadly curved at the tips. Sporidia filiform, nucleate (becoming septate)? 40–60 x 1¼μ.

Resembles outwardly *Pyrenopeziza atrata* (Pers.).

Tympanis Oxydendri E. & E.

On dead limbs of *Oxydendrum arboreum*, Nuttallburg, West Va., Dec. 1893 (L. W. Nuttall, No. 258).

Cespitose, 3–5 together, erumpent, at length deciduous, black, ½–¾ mm. diam., contracted below into a short, thick stipe, margin subundulate. Asci cylindrical, 110–130 x 15–18μ, including the short stipe. Paraphyses slender, abundant. Sporidia numerous, minute, oblong, hyaline or yellowish, 2½–3 x 1μ.

Allied to *T. fasciculata* Schw., but asci larger and sporidia smaller.

Stictis Vaccinii E. & E.

On dead leaves of *Vaccinium ovatum*, Tracyton, Kitsap Co., Wash., Dec. 1893 (Adella M. Parker, No. 217).

Hypophyllous, gregarious, erumpent, generally on an indefinite, pale spot which is often visible also on the upper side of the leaf, but often without any spot, orbicular or somewhat irregular in outline ¾–1 mm. diam., with a prominent, light colored, 3–4-cleft margin. Hymenium glaucous white, plane. Asci clavate-cylindrical, sessile, 70–75 x 6μ. Paraphyses filiform, branched at the tips and bearing minute, subglobose, hyaline conidia. Sporidia filiform, multinucleate, hyaline, 50–55 x 1½–2μ.

This is a more robust species than *S. quercifolia* Cke., which also has longer asci and narrower sporidia, but the two are closely allied.

Stictis chrysopsis E. & E.

On dead stems of *Ceanothus integerrimus*, Columbia River, W. Klikitat Co., Wash., Jan. 1894 (W. N. Suksdorf, No. 309).

Ascomata scattered, immersed, exposed above and at first covered with a thin, white membrane, soon open, urceolate, exposing the deep orange-colored disk, 1–1½ mm. diam. Asci cylindrical, 200–225 x 8–10μ. Paraphyses filiform, about as long as the asci, simple, scarcely thickened above, about 1μ thick. Sporidia filiform, multinucleate, nearly as long as the asci, 1½–2μ thick, hyaline, interwoven.

Schizoxylon compositum E. & E.

On dead twigs of *Quercus coccinea*, Newfield, N. J., and on dead twigs of *Symphoricarpos occidentalis*, Rockport, Kansas (Bartholomew).

Ascomata erumpent-superficial, discoid, white pruinose, ¾–1½ mm. diam. Disk, when the white pruinose layer disappears, distinctly olivaceous. Asci fusoid-cylindrical or lanceolate, 150–200 x 8–10μ, 8-spored, short-stipitate. Sporidia linear, 100–150 x 3–4μ. Separating into elliptical or oblong joints 5–8 x 3–4μ.

This differs from all the other species in the excipulum, containing often 2–6 distinct ascigerous nuclei, resembling on a horizontal section, so many imbedded perithecia. The paraphyses are filiform and more or less recurved and branched above.

Sphæropeziza Coloradensis E. & E.

On decorticated stems of *Potentilla fruticosa*, North Park, Colo., July, 1894 (Prof. C. S. Crandall, No. 30).

Ascomata scattered, erumpent-superficial, about ¾ mm. diam., subglobose and closed at first, then depressed and dehiscent above, with the fimbriate-lacerate margin incurved. Asci clavate, 45–50 x 5–6μ, sessile and closely surrounded and overtopped by the conglutinate paraphyses. Sporidia biseriate, oblong-cylindrical, hyaline, 2–5- (mostly 3-) septate, not constricted, ends rounded, 10–14 x 3–3½μ.

Patinella macrospora E. & E.

On dead stems of *Geum Rossii*, mountains above Cameron Pass, N. W. Colo., alt. 12,000 ft., July, 1894 (Prof. C. S. Crandall, No. 24).

Ascomata gregarious, discoid, superficial, attached by a central point, olive-black, glabrous, about ¾ mm. diam., disk flat, with a thin, narrow, entire, erect margin. Asci clavate-cylindrical, 100–110 x 15–20μ. 8-spored. Paraphyses stout, simple, olivaceous above, and enlarged into an obovate, olivaceous head, 6–7 x 5–6μ. Sporidia uniseriate below, subbiseriate above, elliptical, hyaline, smooth, 2-nucleate, about 20 x 10μ, apparently not fully matured.

Differs from *P. hyalophœa* Sacc. principally in its much larger sporidia.

Scleroderris orientalis E. & E.

On dead limbs of *Cedrus Libani* (cult.), Newfield, N. J., April, 1894.

Ascomata erumpent, cespitose, obconical, dirty white, small, 300–400μ diam., pulverulent, closely crowded together, or more rarely single, with much the same habit as *S. pallidula* Cke., and *Dermatea carnea* C. & E. Disk plane or convex, immarginate. Asci clavate-oblong, stipitate, p. sp. 55–60 x 12–14μ, paraphysate. Sporidia biseriate, oblong, obtuse, straight or slightly curved, 3-septate, not constricted, hyaline, 18–23 x 8–10μ.

* * * * SPHÆROPSIDEÆ.

Phyllosticta lindericola E. & E.

On leaves of *Lindera Benzoin*, Nuttallburg, West Va., Sept. 1894 (L. W. Nuttall, No. 593).

Spots various, punctiform and minute without any definite border or irregular in shape, 1 mm.–1 or 1½ cm. diam., or marginal, forming a narrow strip along the edge of the leaf for half its length, pale brown, nearly the color of weather-beaten wood, with a dark (almost black) border. Perithecia epiphyllous, hemispherical, 100–120μ diam., covered by the blackened epidermis which is raised into pustules barely pierced at the apex. Sporules oblong-elliptical, hyaline, 4–7 x 2–3μ.

This differs in almost every respect from *Ph. Linderœ* E. & E.

Phyllosticta Brunellæ E. & E.

On leaves of *Brunella vulgaris*, Seattle, Wash., Sept. 1892 (Prof. C. V. Piper).

Spots rusty brown, of irregular shape, subangular, 3–4 mm. diam., or often much larger, occupying half or more of the leaf, definitely limited but without any distinct border. Perithecia buried in the substance of the leaf, minute, dark colored, scarcely visible. Sporules cylindrical, 3–3½ x ½–¾μ, straight, obtuse, slightly swollen at each end, much like those of *Ph. osteospora* Sacc., which, however, has sporules 6–7 x 1μ.

Phyllosticta ferax E. & E.

On fading leaves of *Lupinus albifrons*, Pasadena, Cal., Apr. 1894 (Prof. A. J. McClatchie, 682).

Spots subindefinite, epiphyllous, dark, dirty brown, more or less confluent, blackening and killing the leaves. Perithecia epiphyllous, abundant, scattered over the spots and over the green parts of the leaf, semiemergent, globose, of rather coarse cellular structure, 110–150μ diam., perforated above. Sporules abundant, hyaline, continuous, 3–4 x 1–1¼μ.

Phyllosticta macrospora E. & E.

On leaves of *Liriodendron Tulipifera*, Nuttallburg, West Va., Aug. 1894 (L. W. Nuttall).

Spots few, suborbicular, ferruginous-gray, 3–5 mm. diam., with a narrow, raised, darker border. Sporules oblong-elliptical, hyaline, nucleate, 15–30 (mostly 20–25 x 6–7μ).

Phyllosticta allantospora E. & E.

On leaves of *Cakile Americana*, Sandy Hook, N. J., June, 1892 (F. L. Stevens).

Spots suborbicular, wood-color brown, 3–4 mm. diam., margin broad, greenish, subindefinite. Perithecia epiphyllous, subdiscoid, perforated, 100–110μ diam. Sporules oblong or short-cylindrical, hyaline, obtuse, mostly a little curved, 3–5 x 1¼μ.

Phyllosticta Araliæ E. & E.

On leaves of *Aralia spinosa*, Nuttallburg, West Va., Sept. 1894 (L. W. Nuttall, No. 588).

Spots suborbicular, light brown, with the margin a little darker, ½–1 cm. diam. Perithecia epiphyllous, somewhat flattened, 100–150μ diam. Sporules oblong-elliptical, hyaline, 2-nucleate, 10–15 x 5–6μ.

Phyllosticta Aplectri E. & E.

On leaves of *Aplectrum hyemale*, Naaman's Creek, Del., Apr. 1894 (Commons, No. 2,408).

Spots of irregular shape, whitish, with a shaded purple border, 1 cm. diam. Perithecia crowded in the spots, erumpent, depressed-globose, 75–90μ, with a distinct papilliform ostiolum, of a coarse cellular, dark olivaceous texture. Sporules elliptical, hyaline, 6–9 x 5μ, filled with small nuclei. Accompanied by *Fusicladium Aplectri* E. & E. on the same spots.

Phyllosticta rhoicola E. & E.

On leaves of *Rhus Toxicodendron*, Nuttallburg, West Va., Aug. 1894 (L. W. Nuttall, No. 567, partly).

Spots 4–6 mm. diam., deciduous, grayish-white, with a narrow black border. Perithecia epiphyllous, scattered, 100–110μ diam., convex-prominent above, visible also below. Sporules narrow-elliptical, hyaline, 2-nucleate, 5–6 x 2–3μ.

Differs from *P. toxica* E. & M. in its larger deciduous spots with a narrow border, and its narrow-elliptical sporules.

Phyllosticta Anemonis E. & E.

On leaves of *Anemone Pennsylvanica*, Ann Arbor, Mich., Oct. 1893 (Harriet L. Merrow).

Perithecia gregarious, hypophyllous, depressed-globose, erumpent-superficial, 90–110μ diam., subastomous, on light brown, dead looking areas of the leaf, more or less distinctly bounded by the veinlets. Sporules short-cylindrical, slightly curved, obtuse, 5–7 x 1¼μ.

This is different from *Phyllachora Anemonis* (Fr.), which is found both on the petioles and leaves, and has the characteristic stromata of the Dothideaceæ, the single stromata being about twice as large as the perithecia of our *Phyllosticta* and each containing (sec. spec. in F. G. 192) 3–6 ascigerous cells.

Phyllosticta Quercus-Prini E. & E.

On leaves of *Quercus Prinus*, Nuttallburg, West Va., July, 1894 (L. W. Nuttall, No. 542).

Spots orbicular, rusty brown, definite, with a very narrow border, 2–3 mm. diam. Perithecia epiphyllous, scattered, erumpent, 90–110μ diam. Sporules ovate or oblong, hyaline, mostly a little curved, 5–6½ x 2–2½μ.

This comes very near *Ph. Ludoviciana* E. & E. (J. M. II, p.

130), but in that species the spots are larger, perithecia more prominent below, and sporules rather larger. *Ph. marginalis* E. & E. also has similar sporules but the perithecia are hypophyllous.

Phyllosticta Castaneæ E. & E.

On leaves of *Castanea vesca*, near Nuttallburg, West Va., July, 1894 (L. W. Nuttall, No. 570).

Spots orbicular, rust color, with narrow, dark-shaded margin. Perithecia epiphyllous, scattered on the spots, dark, semierumpent, 100μ diam., often collapsing. Sporules oblong, hyaline, 5–7 x 2–2½μ.

Phoma negundinicola Thum., var. **ramicola** E. & E.

On dead limbs of *Negundo aceroides*, Nuttallburg, West Va., Apr. 1894 (L. W. Nuttall, No. 466), Delaware (Commons).

Perithecia evenly, but not thickly scattered, globose, small, ¼–⅓ mm. diam., covered by the slightly ruptured epidermis, but distinctly prominent. Sporules oblong-elliptical, or ovate, hyaline, with a single large nucleus, 10–13 x 4–5½μ.

Differs from the typical form on the dead peduncles, in its broader (2½–3μ) sporules.

Phoma Pennsylvanica E. & E.

On dead limbs of *Acer Pennsylvanicum*, Nuttallburg, West Va., Feb. 1894 (Nuttall, No. 318).

Perithecia numerous, evenly scattered, subepidermal, ⅓–½ mm. diam., whitish inside, raising the epidermis into minute pustules, but scarcely rupturing it. Sporules subglobose, 6–7½μ diam., nearly hyaline.

Phoma pedunculi E. & E.

On old peduncles of *Magnolia Fraseri*, Nuttallburg, West Va., Jan. 1894 (L. W. Nuttall, No. 297).

Perithecia scattered, flattish pustuliform, ½–¾ mm. diam., with a prominent, papilliform ostiolum. Sporules fusoid-oblong, hyaline, 2–3-nucleate, 7–11 x 2–2½μ, ends acute.

Differs from *Stagonospora pedunculi* E. & E. in its larger, flatter perithecia and fusoid-oblong (not cylindrical), rather shorter sporules.

Phoma obscurans E. & E.

On leaves of *Fragaria* (cult.), Nuttallburg, West Va., and Newfield, N. J.

Spots 5–8 mm. diam., with a ferruginous center and broad purple border, paler below. Perithecia few, scattered, convex-prominent. Sporules oblong - elliptical, hyaline, 2-nucleate, 4½–5½ x 1½–2μ. Basidia simple, lanceolate-fusoid, 8–12 x 1½μ.

Phyllosticta fragaricola Desm. has similar sporules, but (sec. specc. in the various exsiccati), the spots are much smaller, with a white center. The basidia also indicate *Phoma* and not *Phyllosticta*.

Aposphæria alpigena E. & E.

On dead stems of *Sambucus melanocarpa*, Cameron Pass, Colo., July, 1894 (C. F. Baker).

Perithecia scattered, superficial, globose or elliptical, 150–250μ diam., mostly depressed, obscurely papillate. Sporules elliptical, hyaline, enucleate, 3–3½ x 1½μ.

Differs from *A. fuscidula* Sacc. in growing on the bark (not on decorticated limbs), and in its smaller sporules.

Aposphæria pezizoides E. & E.

On decorticated wood of *Platanus*, *Liquidambar*, *Fraxinus*, *Acer*, *Salix nigra*, and *S. falcata*, Nuttallburg, West Va., April, 1894 (L. W. Nuttall).

Perithecia erumpent-superficial, seriate-aggregate, hemispherical, about ¾ mm. diam., with a distinct papilliform ostiolum, at length collapsing and pezizoid or discoid. Sporules elliptical or ovoid, 4–6 x 2½μ, ends obtuse.

This seems to grow exclusively on abrasions, below high-water mark, made by driftwood on small trees.

Sphæronema Physocarpi E. & E.

On dead stems of *Physocarpus opulifolius*, Nuttallburg, West Va., May, 1894 (L. W. Nuttall, No. 484).

Perithecia gregarious, erumpent-superficial, hemispherical, 150μ diam., with a straight, stout beak 90–115μ long. Sporules narrow-elliptical, hyaline, 2–3-nucleate, 7–9 x 2½μ.

Sirococcus Halesiæ E. & E.

On dead limbs of *Halesia tetraptera*, Nuttallburg, West Va., Feb. 1894 (L. W. Nuttall, No. 376).

Perithecia scattered or 2–3-connate, erumpent, subglobose, about ⅓ mm. diam., black, with a minute papilliform ostiolum. Sporules subglobose, about 3μ diam., greenish-hyaline, 3–6-concatenate, the terminal sporule oblong and paler. Chains simple, or sparingly branched, arising directly from the proligerous layer without any distinct basidia, collected in stellate clusters.

Pyrenochæte papyricola E. & E.

On old pasteboard lying by the roadside, Newfield, N. J., July, 1894.

Perithecia scattered, subglobose, 100–110μ diam., clothed with black, bristle-like hairs. Sporules subglobose or subelliptical, hyaline, 3–3½μ in the longer diameter.

Placosphæria Arctostaphyli E. & E.

On dead twigs of *Arctostaphylos Nevadensis*, Mt. Paddo, Wash., alt. 6,000–7,000 ft., July, 1886 (Suksdorf).

Stromata erumpent-superficial, pulvinate, ½–¾ mm. diam., flattened and mostly depressed in the center, dotted with punctiform ostiola, closely embraced by the epidermis, multilocular. Sporules oblong-cylindrical, hyaline, continuous, 5–6 x 2–2½μ.

Has the stroma of *Dothidea* producing only stylospores.

Fusicoccum Tiliæ E. & E.

On dead limbs of *Tilia Americana*, Naaman's Creek, Del., Aug. 1894 (A. Commons, No. 2,517).

Stromata scattered, buried, conic-ovate, 250–350μ diam., one-celled, gray inside, raising the epidermis into acute pustules perforated with a round opening. Sporules oblong-fusoid, hyaline, 2-nucleate, 7–10–2½ x 3μ.

Fusicoccum ilicinum E. & E.

On dead limbs of *Ilex opaca*, Nuttallburg, West Va., May, 1894 (L. W. Nuttall, No. 496).

Stromata cortical, convex, about 1 or 1½ mm. diam., multilocular, whitish inside, the tuberculiform apex pierced with a single pore, rupturing the epidermis and slightly raising it. Sporules fusoid, hyaline, nucleate, 15–22 x 2½–3μ.

Cytisporella pinicola E. & E.

On bark of limbs of *Abies Engelmanni*, N. W. Colo., July, 1894 (Prof. C. S. Crandall, No. 6).

Stromata erumpent-superficial, verruciform, 1–1½ mm. diam., easily deciduous. Perithecia peripherical. Sporules minute, elliptical, hyaline, 3 x 1½μ, borne on much branched basidia 15–20 x 2μ. The habit is that of *Dothiorella*, but the minute sporules are those of *Cytisporella.*

Cytispora caryigena E. & E.

On dead limbs of *Carya alba*, Nuttallburg, West Va., May, 1894 (L. W. Nuttall, No. 513).

Stroma cortical, convex, 1½–2 mm. diam., slaty black, 4–6-celled, cells yellowish-white, subglobose, small. Sporules allantoid, hyaline 3½–4½ x ¾–1μ.

(Spermogania of *Valsa caryigena*, B. & C.)?

Cytispora exasperans E & E.

On dead limbs of *Acer rubrum*, Newfield, N. J., and on *Acer Pennsylvanicum*, Nuttallburg, West Va. (Nuttall).

Stroma buried in the bark, orbicular, about 1 mm. diam., 4–6-celled (at length one-celled), prolonged above into a stout, conical beak opening by a single round pore at the apex. Sporules oblong or allantoid, hyaline, 5–7 x 1¼μ.

Cytispora Celtidis E. & E.

On dead limbs of *Celtis*, Nuttallburg, West Va., Feb. 1894 (L. W. Nuttall, No. 314).

Stroma valsoid, flat, thin, 1½–2 mm. diam., only penetrating the surface of the bark, multilocular, gray inside, raising the bark into small pustules and finally rupturing it, cells resembling perithecia. Sporules allantoid, 6–7 x 1–1½μ.

Cytispora phlyctænoides E. & E.

On dead limbs of *Corylus Avellana*, Newfield, N. J., June, 1894.

Stromata cortical, conic-convex, 1–1¼ mm. diam., indistinctly multilocular, pale inside, with the enclosing layer darker, raising the epidermis into numerous small pustules which are soon ruptured, opening mostly through a single pore. Sporules fusoid, hyaline, 2-nucleate, 6–9 x 2–2¼μ, straight. Basidia simple, attenuated and curved above, about 20 x 1½μ, resembling the sporules of *Phlyctæna*.

Cytispora Negundinis E. & E.

On dead limbs of *Negundo aceroides*, Rockport, Kansas, April, 1894 (Bartholomew, No. 1,449).

Stroma cortical, conic-convex, 1–1¼ mm. diam., slaty black, multilocular, the cells ovate-globose, numerous (15–20 or more), all opening through a single pore in a central column which pierces the epidermis and raises it into little pustules. Sporules allantoid, hyaline, slightly curved, 5½–7 x 1¼–1½μ. On branched basidia 20μ long.

This is different from *C. macilenta* Rob. and Desm., as shown by a comparison of the specc. From *C. Pseudoplatani* Sacc., it differs in its longer sporules and branching basidia.

Cytispora Halesiæ E. & E.

On dead limbs of *Halesia tetraptera*, Nuttallburg, West Va., May, 1894 (L. W. Nuttall).

Stromata convex-conical, sunk in the bark, orbicular, about 1 mm. diam., white inside, unilocular, the inner surface of the cavity lined with simple, straight basidia about 15μ long, bearing the oblong-fusoid, hyaline, 2-nucleate, straight, 5–7 x 1–1½μ sporules, which are expelled through a single orifice perforating the raised epidermis.

This probably is the spermogonial stage of *Diaporthe Halesiœ* or *D. tetraptera*, both of which are found in company with it.

Sphæropsis Coryli E. & E.

On dead limbs of *Corylus Avellana*, Newfield, N. J., June, 1894.

Perithecia thickly scattered, globose, subcuticular, about ½ mm. diam., raising the epidermis into small pustules which are finally ruptured at the apex with a round or elongated opening. Sporules oblong-elliptical, or the longer ones slightly curved and subcylindrical, 15–20 x 8–10μ.

Sphæropsis Asiminæ E. & E.

On dead limbs of *Asimina triloba*, Nuttallburg, W. Va., Feb. 1894 (L. W. Nuttall, No. 370).

Perithecia scattered or subseriate, buried in the bark which is raised into little pustules over them and soon ruptured. Perithecia small (¼ mm.), thick-walled, with an obscurely papilliform ostiolum. Sporules oblong-elliptical, brown, obtuse, 18–22 x 8–10μ.

Sphæropsis Neilliæ E. & E.

On *Physocarpus opulifolius*, London, Canada, May, 1893 (J. Dearness).

Perithecia scattered or sometimes 2–3 confluent, small (200μ), covered by the blackened epidermis, semierumpent, with a black, shining papilliform ostiolum. Sporules small, acutely elliptical, or ovate-elliptical, pale brown, 12–16 x 4–5μ.

Sphæropsis Physocarpi E. & E.

On dead *Physocarpus opulifolius*, Nuttallburg, West Va., May, 1894 (L. W. Nuttall, Nos. 482 and 486).

Perithecia scattered, ⅓ mm. diam., buried in the inner bark, with their apices and papilliform ostiola erumpent, white inside (at first), sometimes, as in the preceding species 2–3 confluent. Sporules varying from short-elliptical 12–15 x 10μ, to oblong- or obovate-elliptical 15–20 x 10μ.

Differs from the preceding in its buried perithecia and much larger sporules.

Sphæropsis Ipomœa E. & E.

On dead peduncles of *Ipomœa pandurata*, Nuttallburg, West Va., Dec. 1893 (L. W. Nuttall, No. 249).

Perithecia scattered, ovate-globose, 250–300μ diam., the upper part prominent and closely covered by the shining black epidermis. Sporules elliptical, brown, 18–23 x 10–13μ, on pedicels of about the same length as the sporules.

Coniothyrium infuscans E. & E.

On dead stems of *Valeriana edulis*, Eastern slope of Rabbit Ear Range, Colorado, July, 1894 (Prof. C. S. Crandall, No. 10).

Perithecia densely gregarious, blackening the stems, ovate-globose, membranaceous, black, erumpent-superficial, 170–200μ diam. Sporules globose-elliptical, brown, 6–8μ in the longer diam.

Haplosporella alpina E. & E.

Cameron Pass, Colorado, July, 1894, 10,000 ft. alt. (C. F. Baker, No. 236).

On dead stems of *Sambucus melanocarpa*. Stroma convex-hemispherical, erumpent-superficial, black, 300–400μ diam. Perithecia (cells) buried in the stroma, 100–150μ diam., their papilliform ostiola visible on the surface of the stroma. Sporules globose, 5μ, or elliptical, 6–7 x 5μ, brown.

Apparently the pycnidial stage of some dothideaceous fungus (*Auerswaldia*)?

Haplosporella Araliæ E. & E.

On dead limbs of *Aralia spinosa*, Nuttallburg, West Va., Feb. 1894 (Nuttall, No. 375).

Stromata seriate-connate, erumpent through longitudinal cracks in the bark, and extending from 4–5 mm. to 2 or more centimetres. Perithecia ovate-globose, buried in the black, subcarbonaceous stroma, 3–6 in each single stroma, about ⅓ mm. diam. Sporules elliptical, brown, 20–25 x 10–12μ.

This may be the pycnidia of *Botryosphœria fuliginosa* (M. & N.).

Haplosporella Celtidis E. & E.

On dead limbs of *Celtis*, West Va., Feb. 1894 (L. W. Nuttall, No. 315).

Perithecia mostly in valsoid clusters of 3–10, small (200μ), white inside, slightly sunk in the inner bark, their papilliform ostiola rupturing the epidermis. Sporules elliptical, brown, continuous, 18–22 x 10–12μ, on basidia of about the same length as the sporules.

Diplodia Kansensis E. & E.

On weather-beaten, bleached bark of *Juniperus Virginiana*, Rockport, Ks., Dec. 1893 (E. Bartholomew, No. 1,292).

Perithecia scattered, subglobose, erumpent-superficial, ⅓–½ mm. diam. Sporules ovate-elliptical, uniseptate, constricted, the septum below the middle, brown, becoming nearly opake, 20–27 x 12–15μ.

Differs from *D. Juniperi* West, and *D. Virginiana* Cke., in its larger ovate sporules.

Diplodia caryigena E. & E.

On dead limbs of *Carya alba*, Canada (Dearness) and West Va. (Nuttall).

Perithecia subseriate, sunk in the inner bark, covered by the epidermis which is raised into pustules and ruptured, about ½ mm. diam., black. Sporules elliptical, brown, uniseptate, scarcely constricted, 15–20 x 8–10μ. (Pycnidia of *Valsa caryigena* B. & C.)?

Diplodia infuscans E. & E.

On bark of dead limbs of *Fraxinus Americana*, Nuttallburg, West Va., May, 1894 (L. W. Nuttall, No. 459).

Perithecia ovate-globose, small, 110–150μ diam., thickly scattered, blackening both the outer and inner surface of the bark. Ostiolum not conspicuous, obscurely papilliform. Sporules oblong-elliptical, 12–15 x 8–10μ, scarcely constricted.

In *D. inquinans* West, the sporules and perithecia are larger, and the bark is not blackened within.

Diplodia Cercidis E. & E.

On dead limbs of *Cercis Canadensis*, Nuttallburg, West Va., Apr. 1894 (L. W. Nuttall, No. 449).

Perithecia subseriate, globose, ⅓–½ mm. diam., slightly sunk in the inner bark and splitting the epidermis with short, longitudinal clefts. Sporules elliptical, 20–23 x 10–15μ, on stout basidia, uniseptate.

Botryodiplodia acerina E. & E.

On dead limbs of *Acer Pennsylvanicum*, Nuttallburg, West Va., Feb. 1894 (Nuttall, No. 319).

Perithecia erumpent in botryoidal clusters often seriately confluent for 1 or more cm., about ½ mm. diam., white inside, flattish above, with a broad papilliform ostiolum. Sporules elliptical, brown, uniseptate, 20–25 x 12–15μ, on basidia of about the same length.

Ascochyta veratrina E. & E.

On dead leaves and petioles of *Veratrum Californicum*, Pullman, Wash., Nov. 1893 (Prof. C. V. Piper, No. 145).

Perithecia scattered, sunk in the substance of the leaf with the apex and conic-papilliform ostiolum erumpent, about ⅓ mm. diam. Sporules cylindrical, obtuse, 3–4-nucleate, becoming uniseptate, hyaline, about 12 x 2½–3μ.

Differs from *A. Veratri* Cavarra (Fungi Langobardiæ, No. 98) in its larger, ostiolate perithecia, not on any spots and in its smaller, straight sporules.

Ascochyta achlyicola E. & E.

On leaves of *Achlys triphylla*, Seattle, Wash., Aug. 1892 (Prof. C. V. Piper, No. 114).

Spots suborbicular or irregular, 3–15 mm. diam., with a dirty white center and a broad, shaded purple margin. The white center is more or less deciduous. Perithecia epiphyllous, innate-prominent, small (75μ), few on a spot. Sporules elliptical, 2-nucleate, hyaline, 5–8 x 2½–3μ, soon becoming uniseptate.

Ascochyta Asclepiadis E. & E.

On leaves of *Asclepias Cornuti*, Pleasant Hill, Del., May, 1894 (Commons, No. 2,420).

Spots amphigenous, suborbicular, ½–1 mm. diam., grayish, with darker zones and a shaded, dark-brown border. Sporules oblong-(or ovate-) elliptical, hyaline, 6–8 x 3μ, becoming faintly uniseptate. Perithecia epiphyllous, innate, black, pierced above, 100–110μ diam.

Hendersonia stygia E. & E.

On decorticated, bleached wood of a cottonwood log, Rockport, Ks., Dec. 1893 (E. Bartholomew).

Perithecia erumpent-superficial, scattered, ovate-globose, ½ mm. diam., or hysteriiform, 1 mm. or more long, at first with a prominent papilliform ostiolum, but soon broadly open above, the upper part finally disappearing, leaving the cup-shaped base filled with abundant sporules and then more resembling acervuli than perithecia. Sporules ovate-elliptical, subinequilateral, abruptly narrowed at the ends, 3–5-septate, but not constricted, the inner cells nearly opake, the small, terminal cells subhyaline, 12–15 x 6–8μ.

The species is anomalous in the imperfectly developed perithecia, the upper part soon falling away and leaving the cup-shaped base.

Hendersonia falcata E. & E.

On bark of fir trees, Exploits, Newfoundland, Dec. 1893 (Rev. A. C. Waghorne, No. 10).

Perithecia cespitose-erumpent, 6–10 together, united below in a thin stroma, broadly perforated and subcollapsed above. Stromata small (1 mm.), subconfluent and subseriately arranged. Sporules falcate, more abruptly curved or bent above, yellowish-hyaline, granular, becoming 1–3-septate, subattenuated below, on pedicels shorter than the sporules, 20–22 x 5–7μ.

Differs from *Hendersonia rostrata* S. & E. in its stromatic growth and broader, shorter sporules.

Stagonospora petiolorum E. & E.

On dead petioles of *Aralia spinosa*, Nuttallburg, West Va., Feb. 1894 (L. W. Nuttall, No. 357).

Perithecia scattered, innate, small, slightly prominent and covered by the shining, blackened epidermis, 150–250μ diam., mostly-subelliptical. Sporules oblong, hyaline, nucleate, becoming 1- or more-septate, 12–20 x 3–5μ.

Stagonospora Physocarpi E. & E.

On dead stems and limbs of *Physocarpus opulifolius*, Nuttallburg, West Va., May, 1894 (L. W. Nuttall, No. 485).

Perithecia scattered, depressed-hemispherical, 200–250μ diam., sunk in the bark, with the upper part prominent but covered by the epidermis which is pierced by the papilliform ostiolum, white inside. Sporules linear, multiseptate, hyaline, 25–35 x 3–4μ.

Stagonospora Liriodendri E. & E.

On decorticated wood of *Liriodendron Tulipifera*, Alcove, N. Y., June, 1893 (C. L. Spear, No. 304).

Perithecia superficial, evenly scattered or 2–4 subconfluent, obtusely conic-globose, about ⅓ mm. diam. Sporules cylindrical, hyaline, 8–10 x 2–2½μ, nucleate but not visibly septate, though a central nucleus causes them to appear uniseptate. Basidia slender 25–35μ long, profusely and subverticillately branched.

Camarosporium Celtidis E. & E.

On dead limbs of *Celtis occidentalis*, Rockport, Ks., March, 1894 (Bartholomew, No. 1,400).

Perithecia scattered or cespitose, ovate, ⅓ mm. diam., often seriate, covered by the epidermis at first, with the short-cylindrical, obtuse ostiola erumpent. Sporules oblong, or oblong-elliptical or even cylindrical, brown, mostly 3-septate, 12–15 x 4–5μ, but some of them 5–6-septate, with one or two cells divided by a longitudinal septum, 15–20 x 5–7μ.

There is also a *Teichospora* accompanying, but too scanty to admit of accurate description.

Septoria Echinocystis E. & E.

On leaves of *Echinocystis marah*, Ukiah, Mendocino Co., Cala., May, 1894 (W. C. Blasdale, No. 220).

Spots subangular, limited at first by the veinlets and greenish, becoming light brown with the margin darker, 3–5 mm. diam. Perithecia innate, globose, about 80μ diam., thin, imperfectly developed, brown. Sporules linear, hyaline, nearly straight or subundulate, becoming faintly 1–2-septate, 25–50 x 2½–3μ.

Septoria solanicola E. & E.

On leaves of *Solanum umbelliferum*, Ukiah, Mendocino Co., Cala., May, 1894 (W. C. Blasdale, No. 241).

Spots scattered or confluent, orbicular, 2–3 mm. diam., pale brown with darker border. Perithecia epiphyllous, numerous, pale brown, collapsing, 100–110μ diam. Sporules bacillary, hyaline, faintly nucleate, 20–30 x 1¾–2¼μ.

Differs from the other species on *Solanaceæ* in its shorter, continuous sporules. Roumeguere in F. Gallici 722 has a *Septoria* labeled *S. Solani*, Roum., on *Solanum nigrum*, but the spec. is entirely sterile.

Septoria alnifolia E. & E.

On leaves of *Alnus rubra*, Seattle, Wash., Aug. 1893 (Prof. C. V. Piper, No. 82).

Spots red-rusty brown, orbicular or irregular, mostly with a narrow, dark, raised bordering line, 2–5 mm. diam., more obscure below. Perithecia epiphyllous, innate-prominent, black, minute (80–100μ), not abundant. Sporules linear, hyaline, with a row of nuclei, mostly curved to a semicircle, 35–55 x 3μ.

Of the three described species on *Alnus*, *S. Alni* Sacc. has bacillary sporules, *S. alnicola* Cke. has oblong sporules, and *S. alnigena* Sacc. has no spots.

Septoria solitaris E. & E.

On leaves of *Rhododendron occidentale*, Mill Valley, Cala., July, 1893 (W. C. Blasdale, 172).

Spots amphigenous, round, white with a purple border, numerous, about 2 mm. diam. Perithecia mostly one in the center of each spot, globose, 120–150μ diam., visible on both sides of the leaf. Sporules abundant, bacillary, hyaline, continuous, straight or subundulate or bent, obtuse, about 20 x 2μ.

Septoria Rhododendri Cke. has the perithecia aggregated or circinate and sporules 40μ long.

Septoria Œnanthis E. & E.

On leaves of *Œnanthe sarmentosa*, Seattle, Wash., Aug. 1892 (Prof. C. V. Piper, No. 50).

Spots scattered, small (1–3 mm.), white, subangular, definite. Perithecia few on a spot (3–6), small (75μ), black (yellow-brown under the microscope), subastomous. Sporules fusoid-cylindrical, hyaline, nucleate, 20–35 x 1½–2μ, ends subacute, slightly curved.

Septoria saccharina E. & E., var. **occidentalis.**

On dead leaves of *Acer glabrum*, Fairhaven, Wash., Aug. 1892 (Prof. C. V. Piper, No. 57).

Differs from the type in having the small, white spots, on which the perithecia are seated, not so evenly distributed over the leaf, but collected on rusty brown, yellow-margined, subindefinite spots 3–4 mm. diam.

Septoria circinata E. & E.

On leaves of *Acer circinatum*, Everson, Wash., Aug. 1892 (C. V. Piper).

Spots orbicular, scattered, 2–3 mm. diam., pale yellowish-white, definite but without any distinct border. Perithecia amphigenous, few (4–10), subcircinately arranged around the whitish center of the spots, small, 75μ diam. Sporules abundant, filiform, variously curved and bent, 30–60 x 1¼μ, nucleate, but not septate. Seems quite distinct from the other species on maple.

Septoria Tecomæ E. & E.

On leaves of *Tecoma radicans*, Nuttallburg, West Va., Aug. 1894 (L. W. Nuttall, No. 580).

Spots light brown (wood color), irregular in shape, small, 1½–2 mm., inconspicuous and indistinctly margined. Perithecia immersed, small (65–70μ), barely visible with a lens. Sporules 40–50 x 2–2½μ, not strongly curved, nucleate, hyaline.

Septoria Ludoviciana E. & E.

On leaves of *Lactuca Ludoviciana*, Fort Collins, Colo., June, 1894 (C. F. Baker, No. 257).

Spots angular, limited by the veinlets, wood-brown, 2–5 mm. diam., often confluent. Perithecia punctiform, minute, black, epiphyllous, 75–80μ diam., apex erumpent. Sporules cylindrical, more or less curved, obtuse, not septate, 15–25 x 2μ.

Differs from *S. unicolor* Winter, in its lighter colored, angular spots, rather larger perithecia and thicker sporules; differs also in several respects from *S. Lactucæ* Pass. and *S. lactucicola* E. & M.

Septoria Trautvetteriæ E. & E.

On *Trautvetteria palmata*, Nuttallburg, West Va., July, 1894 (L. W. Nuttall, No. 564).

Spots irregular, subangular, partly limited by the veinlets of the leaf, often elongated and acute at one end, brownish-black, with an irregularly shaped white center which is well defined, angular, 3–5 mm. in the longer diam. Perithecia epiphyllous but also visible below, small (65–75μ), scattered, dark. Sporules abundant, nearly straight or slightly curved, continuous, 22–30 x 2μ.

Differs from *S. Anemonis* Desm. in its broad, dark margined, white centered spots and rather longer and thicker sporules.

Septoria Polymniæ E. & E.

On leaves of *Polymnia Uvedalia*, Nuttallburg, West Va., July, 1894 (L. W. Nuttall, No. 543).

Spots scattered, angular, limited by the veinlets, 2–4 mm. diam., dirty green. Perithecia epiphyllous, minute, 75μ diam., scattered, innate, inconspicuous. Sporules filiform, continuous, 35–50 x 1–1¼μ.

Septoria hyalina E. & E.

On *Viola lanceolata*, Massachusetts (Miss Clarke); on *V. primulæfolia*, West Va. (Nuttall), and on *V. blanda*, Michigan (Hicks).

Spots minute (½–1 mm.), white, with a dark purple-shaded border. Perithecia punctiform, black, epiphyllous, subglobose, 65–75μ diam., not abundant. Sporules filiform, nearly straight, or slightly curved, hyaline, nucleate, not visibly septate, 20–40 (mostly 25–35) x 1–1¼μ.

S. Violæ West, has yellowish-brown perithecia on pale zonate spots with a reddish-brown border.

Septoria micropuncta E. & E.

On leaves of *Osmorrhiza*, Washington, D. C. (1891)? (E. A. Southworth).

Spots small (1–1½ mm.), subangular, white, with a broad, dark colored border. Sporules cylindrical, slightly curved, not septate or visibly nucleate, 18–27 x 1¼–1½μ.

This is very different from *S. Osmorrhizæ* Pk. which has the spots larger, perithecia also larger, subdiscoid and amber colored, and sporules 35–55 x 2–2½μ, uniseptate.

Septoria Megarrhizæ E. & E.

On leaves of *Megarrhiza Oregana* Benton, Wash., July 14, 1892 (C. V. Piper, No. 112, partly).

Spots orbicular, dirty white, with a broad, dark colored border, 3–5 mm. diam. Perithecia epiphyllous, light colored, innate-subprominent, subastomous, thin, 80–110μ diam. Sporules filiform, nearly straight, hyaline, faintly nucleolate, 40–60 x 2½–3μ.

Phleospora Megarrhizæ E. & E.

Same host and collector as *Septoria Megarrhizæ.*

Spots greenish at first, the central portion (1–3 mm. diam.) becoming dirty white with a faint, dark purple margin. Perithecia epiphyllous, subdiscoid, thin, perforated above, light colored, becoming darker, 150μ diam. Sporules oblong, obtuse, 1–3-septate, hyaline, sometimes narrowed in the middle, 13–27 x 6–8μ.

Distinguished from *Septoria Megarrhizæ*, even without microscopical examination by its much smaller subangular white spots.

Phlyctæna Ipomœa E. & E.

On calyx lobes of *Ipomœa pandurata*, Nuttallburg, West Va., Dec. 1893 (L. W. Nuttall, No. 250).

Perithecia scattered, subcuticular, 75–80μ diam., covered by the blackened, slightly raised epidermis. Sporules linear, hyaline, curved above, 15–20 x 1¼μ.

Hysteromyxa corticola E. & E.

On inner surface of old cottonwood bark, Rockport, Ks., Dec. 1893 (E. Bartholomew, No. 1,306).

Perithecia erumpent - superficial, gregarious, membranaceous, yellowish-brown and pustuliform when fresh, collapsing to concave, nearly flat when dry, and then darker colored, the disk or center with a faint, flesh-colored tint, ¼–⅓ mm. diam. Sporules globose, 6–8μ diam., yellowish, with a tinge of rose color.

Differs from *H. effugiens* S. & E. in its different habitat and the darker color of the perithecia.

Dothichiza Cassandræ E. & E.

On dead limbs of *Cassandra calyculata*, Ann Arbor, Mich., May, 1894 (L. N. Johnson, No. 1,591).

Perithecia erumpent, surrounded by the ruptured epidermis, ovate-globose and closed at first, ⅓ mm. diam., then irregularly ruptured and subcupulate, ½ mm. diam. Sporules fusoid, hyaline, continuous, straight, acute, 10–14 x 2–2½μ.

Apparently the spermogonia stage of *Cenangium Cassandræ* Pk.

Glœosporium tremuloides E. & E.

On leaves of *Populus tremuloides*, Racine, Wis., Sept. 1893 (Dr. J. J. Davis).

Spots amphigenous, suborbicular, scattered or subconfluent, definite, dark brown, 2–4 mm. diam. Acervuli innate, globose or oblong, 75–85μ diam., dark, erumpent on both sides of the leaf, often covered above by the loosened, silvery epidermis. Conidia elliptical, 10–13 x 5½–6½μ, continuous. *G. Tremulæ*, *G. Sibiricum*, and *G. Populi-albæ*, have fusoid or cylindrical conidia ; *G. nævioides* Romell & Sacc. Grev. 21, p. 68, has ovate-oblong conidia, 30–35 x 10–12μ, so that this seems sufficiently distinct from all the other species on poplar leaves.

Glœosporium officinale E. & E.

On leaves of *Sassafras officinale*, Smyrna, Del., June, 1894 (Commons, No. 2,438).

Spots irregular in shape, ½–1 cm. diam., dirty whitish in the center, with the border nearly black. Acervuli minute, numerous, innate, erumpent on both sides of the leaf, but more abundant below, the expelled spores forming little subglobose, pale orange colored subconfluent heaps. Spores oblong or clavate-oblong or ovate, 8–15 x 4–5μ.

This is quite distinct from *Gl. Sassafras* (Cke), (*Gl. affine* E. & K.), in its much larger spores and the different character of the spots.

If, as seems probable, *Phyllosticta affinis* E. & K. in Am. Nat., Nov. 1883, is the same as *Ph. Sassafras* Cke. in Grev., Sept. 1883, the specific name "Sassafras" will have precedence, and "affine," already preoccupied by Saccardo, will be dropped, and *Gl. affine* E. & K. will become *Gl. Sassafras* (Cke.), the fungus being a Glœosporium and not a *Phyllosticta.*

Glœosporium Sanguinariæ E. & E.

On leaves of *Sanguinaria Canadensis,* Nuttallburg, West Va., July, 1894 (L. W. Nuttall, No. 555).

Spots yellow, oblong or irregular, 3–5 mm. diam., situated near the apex of the leaf which is more or less uniformly blackened. Acervuli epiphyllous, numerous, innate, yellow and inconspicuous. Conidia oblong, hyaline, continuous, mostly a little curved, 8–15 x 3½–5½μ.

Glœosporium alboferrugineum E. & E.

On leaves of *Acer saccharinum,* Peoria, Ills., July, 1894 (F. E. McDonald).

Spots numerous, small, subangular, partly limited by the veinlets. 1–2 mm. diam., deep reddish-brown, whitening out. Acervuli 100–150μ diam., hypophyllous, becoming dark. Conidia oblong, hyaline, continuous, 12–14 x 3–3½μ.

Differs from *G. saccharinum* E. & E. in habit and in its conidia twice as long as in that species.

Glœosporium Trillii E. & E.

On leaves of *Trillium sessile,* Berkeley, Cala., April 2, 1894 (W. C. Blasdale, No. 212).

Spots amphigenous, scattered, small (1–2 mm.), dirty white, leaf becoming yellowish around them, finally subconfluent causing the leaf to wither and die.

Acervuli epiphyllous, rather large, yellowish, erumpent, often only one in the center of the spot. Conidia oblong-cylindrical, slightly curved, 10–15 (mostly 10–12) x 2½–3½μ.

Glœosporium serotinum E. & E.

On leaves of *Prunus serotina,* Smyrna, Del., June, 1894 (A. Commons, No. 2,439).

Spots suborbicular, 3–10 mm. diam., deep brick-red, definite, soon confluent covering the entire leaf which is then of a deep red-brick color. Acervuli amphigenous, numerous, flesh color. Conidia oblong, straight, obtuse, 12–15 x 4–5μ.

Differs from *G. prunicolum* E. & E. (J. M. III., p. 129) principally in the much larger conidia.

Myxosporium seriatum E. & E.

On maple bark, Nuttallburg, West Va., June, 1894 (L. W. Nuttall, No. 523).

Nuclei pallid, orbicular, about 1 mm. diam., seated on the surface of the inner bark; surrounded by a thin layer of smoky colored radiating hyphæ from the inner extremities of which the botuliform or oblong, 6–8 x 2–2½μ, hyaline conidia are produced. The nuclei are seriately arranged, and the pale flesh-colored, flattish cirrhi are erumpent through narrow, longitudinal cracks in the bark.

Myxosporium platanicolum E. & E.

On dead limbs of *Platanus*, Nuttallburg, West Va., April, 1894 (L. W. Nuttall, 467).

Acervuli subcutaneous, vesiculoid, pale, 1 mm. diam., raising the ruptured epidermis into pustules but not erumpent. Sporules oval or oblong-ovate, hyaline, nucleate at first, 10–12 x 5–6μ, on stout basidia.

Colletotrichum Rhexiæ E. & E.

On leaves of *Rhexia Virginica,* Kimensi, Del., Aug. 25, 1894 (Commons, No. 2,534).

Spots orbicular, small (1–2 mm.), dirty white with a reddish-purple border. Acervuli mostly epiphyllous, sphæriæform, erumpent, 250–350μ diam., surrounded or clothed with black bristle-like hairs, 60–70 x 3–3½μ. Sporules oblong, obtuse, binucleate, about 12 x 4μ, and very short basidia.

Cylindrosporium Cratægi E. & E.

On leaves of *Cratægus*, Nuttallburg, West Va., July, 1894 (L. W. Nuttall, No. 571).

Leaves more or less mottled with rusty red, at length uniformly of this same color. Acervuli innate, erumpent on both sides, and whitening the surface of the leaf with abundantly discharged conidia, which are 75–100 x 3–3½μ, nearly straight, or more or less undulate and curved, nucleate, and faintly 3–5-septate.

Cylindrosporium ulmicolum E. & E.

On leaves of *Ulmus alata* Starkville, Miss., Nov. 1893 (Prof. S. M. Tracy).

Acervuli numerous, small, pale, buried in yellowish, faded areas of the leaf, visible from above, but erumpent below. Conidia cylindrical, moderately curved, slightly narrowed toward the ends, hyaline, multinucleate, 45–65 x 4μ, expelled in small white tufts, on the lower side of the leaf.

Melanconium stenosporum E. & E.

On bark of *Carya*, Ohio (Morgan, No. 1,002).

Stroma subcuticular, sunk in the surface of the inner bark, orbicular, 1½–2 mm. diam., convex, white inside, but covered by a layer of the narrow, brown, oblong, slightly curved, 13–15 x 3–4μ. Conidia, which are erumpent in black, hemispherical, finally flattened heaps or masses 1–2 mm. diam.

Melanconium acerinum E. & E.

On dead limbs of *Acer macrophyllum*, Pasadena, Cala. (Prof. A. J. McClatchie).

Acervuli buried in the bark, convex, orbicular, 1–1½ mm. diam., raising and rupturing the epidermis. Conidia ovate, nearly opake, 20 x 15μ.

Marsonia Wyethiæ E. & E.

On leaves of *Wyethia glabra*, Santa Rosa, Cala., May, 1894 (W. C. Blasdale).

Acervuli amphigenous, but mostly hypophyllous, small (65–75μ), orbicular, erumpent, nearly white at first, becoming flesh color, crowded in small, angular patches, mostly limited by the veinlets of the leaf, which in these places soon becomes brown, the brown color finally spreading over a great part of, or over the entire leaf. Conidia oblong-ovate, hyaline, uniseptate, scarcely constricted, 18–27 x 10–13μ.

Marsonia Fraseræ E. & E.

On leaves of *Frasera thyrsiflora* Latah Co., Idaho, July, 1892 (C. V. Piper, No. 133).

Spots orbicular, yellowish-brown, ½–1 cm. or more diam., with a broad, dark colored border. Acervuli scattered irregularly on the spots, erumpent above, 150–200μ diam., pale. Conidia oblong-cylindrical, hyaline, uniseptate and more or less constricted at the septum, 12–20 x 5–6μ, ends obtuse.

Marsonia Veratri E. & E.

On leaves of *Veratrum Californicum*, Pullman, Washington, Aug. 1893 (C. V. Piper, No. 158).

Spots amphigenous, small (2–3 mm.), whitish, with a broad, dull-purple border, which is often elongated in the direction of the veins of the leaf for 2–3 cm., with the ends acute, finally more or less confluent, the entire leaf becoming brown and dead. Acervuli small, occupying the centre of the spots, or irregularly scattered over them. Conidia clavate-cylindrical, curved, upper end subtruncate, lower end attenuated and subacute, uniseptate, hyaline, 18–22 x 3–3½μ.

This is not to be confounded with *Cylindrosporium veratrinum* Sacc. & Winter, or with *Ascochyta veratrina* E. & E.

Pestalozzia zonata E. & E.

On decaying fruit of *Cydonia*, Newfield, N. J., Sept. 1890.

Acervuli subepidermal, punctiform, black, raising the cuticle into small pustules, scattered on concentrically zoned, decaying spots on the fruit. Conidia fusoid, 4-septate, slightly constricted at the septa, the two end cells conical and hyaline, the apical one crowned with a spreading crest of three hyaline bristles 15–25μ long, the two cells next below quite dark, so as to obscure the septum between them, the cell next below these nearly hyaline. Pedicels very short.

Pestalozzia Polygoni E. & E.

On living leaves of *Polygonum Virginianum* Stanton, Del., Aug. 1894 (Commons, No. 2,560).

Spots dull brick-red, very irregular in shape and size, mostly elongated 2–10 x 1–4 mm., definite, but without any colored border. Acervuli punctiform, black, suberumpent, epiphyllous, scattered. Conidia cylindrical or fusoid-cylindrical, pale, 3–4-septate and more or less constricted at the septa (which are often indistinct, 18–22 x 4μ, end cells rounded, lower one with a short, slender pedicel, upper one bearing a crest of three, spreading bristles 10–15μ long.

Pestalozzia toxica E. & E.

On leaves of *Rhus Toxicodendron*, Nuttallburg, West Va., Aug. 1894 (L. W. Nuttall, No. 567, partly).

Spots and perithecia as in *Phyllosticta rhoicola* E. & E. Sporules clavate-oblong, 4-septate, 12–15 x 4–5μ, 3 intermediate cells pale brown, end cells short, conical, hyaline, the upper cell with a crest of 3, short, spreading hyaline bristles 6–7μ long. Distance between the two extreme cells 12μ. Pedicels shorter than the spores.

Coryneum cupulatum E. & E.

On dead limbs of *Tsuga Canadensis*, Nuttallburg, West Va., Dec. 1893 (L. W. Nuttall, No. 272).

Erumpent superficial. Acervuli tuberculiform, black, 1–1½ mm. diam., hollowed out so as to be cup-shaped above. Conidia clavate, sessile, 6–9-septate, brown, 60–80 x 12–15μ.

Coryneum abietinum E. & E.

On bark of fir trees, Exploits, Newfoundland, May, 1894 (Rev. A. C. Waghorn, No. 35).

Acervuli erumpent, flat, brownish-black, 1½–3 mm. across, surrounded by the upturned epidermis. Conidia pale brown, fusoid-oblong, 3–4-septate, about 20 x 10μ, on pedicels of about the same length.

* * * * * HYPHOMYCETES.

Botrytis torta E. & E.

On dead leaves of *Carex Fraseri*, Nuttallburg, West Va., Dec. 1894 (L. W. Nuttall, No. 257).

Hyphæ simple, sparingly branched, twisted above as in *B. streptothrix* or in *Streptothrix atra* B. & C., brown, 80–100 x 3–4μ, forming numerous small brownish-black tufts, effused or gregarious, on both sides of the leaf. Conidia elliptical, brown, 5–6½ x 3–3½μ.

Differs from *B. streptothrix* (C. & E.) in its much smaller conidia and more dwarfish growth.

Ovularia Vancouveriæ E. & E.

On leaves of *Vancouveria hexandra*, Cazadero, Cala., May, 1894 (W. C. Blasdale, No. 213).

Spots amphigenous, angular, limited by the veinlets, 1–2 mm. diam., dark brown above, paler below. Hyphæ hypophyllous, fasciculate, simple, 30–35 x 3μ, appearing like a white, pruinose coating. Conidia varying from acutely elliptical, to oblong, and from 10–20 x 4–6μ.

Not to be confounded with *O. Berberidis*, Cke.

Ramularia Castilleiæ E. & E.

On leaves of *Castilleia miniata*, Mts. of Skamania Co., Wash., Aug. 10, 1886 (W. N. Suksdorf, No. 288).

On subferruginous, indefinite spots, 2–3 mm. diam. Hyphæ hyaline, simple, mostly thickened above, 15–25 x 3–4μ, arising from a tubercular base from which they project on all sides, forming light flesh colored, sphæriæform tufts and bearing at their tips the narrow-elliptical, oblong, or cylindrical, hyaline, continuous or uniseptate, 15–25 x 3–4μ conidia.

The Ramularia occupies the central part of the spots and is surrounded by subprominent, black, small, immature perithecia with which it appears to be generically connected.

Ramularia Psoraleæ E. & E.

On leaves of *Psoralea macrostachya*, Ukiah, Mendocino Co., Cala., May, 1894 (W. C. Blasdale, No. 221).

Spots small, round, pale rusty brown, 1–2 mm. diam. Hyphæ fasciculate, simple or sparingly branched above, hyaline, becoming brownish, continuous or faintly 1–3-septate, subgeniculate above. Conidia fusoid, hyaline, uniseptate and often slightly constricted, rather abruptly narrowed at the ends, 12–30 x 3–3½μ.

Ramularia contexta E. & E.

On living leaves of *Menispermum Canadense*, Ann Arbor, Mich., Aug. 1885 (Prof. V. M. Spalding).

Hyphæ slender, hyaline, interwoven, so as to form a thin subseparable, web-like, layer, subangular in outline, 1–2 mm. across, dirty white at first, becoming whiter and thicker. Fertile hyphæ erect, 15–25 x 2–2½μ, continuous, mostly simple. Conidia clavate-fusoid, hyaline, continuous at first, becoming 1-septate, 8–15 x 2–3μ.

Has something the aspect of *Erineum*.

Helicoma monilipes Ell. & Johnson.

On oak bark, Ann Arbor, Mich., Oct. 1893 (L. N. Johnson, No. 666).

Cæspitose, in minute, punctiform, brown tufts, about ⅙ mm. diam., appearing under the lens like minute flattened perithecia of about the same color as the bark. Creeping hyphæ nearly obsolete; fertile hyphæ cespitose, erect, nearly hyaline, irregularly or subdichotomously branched above, closely septate and constricted at the septa so as to appear submoniliform, 40–50 x 3–4μ. Conidia terminal, or becoming lateral by the prolongation of the hyphæ, pale brown, closely and permanently involute, forming a coil 12–15μ diam., the cylinder or thread which forms the coil being 3–4μ thick and coiled about 1½ times.

Chætopsis roseola E. & E.

On oak bark, Ann Arbor, Mich., March, 1894 (L. N. Johnson, No. 156).

Mycelium inconspicuous or none. Fertile hyphæ simple, erect, straight, septate, subulate, paler and attenuated above, 200–250μ long, brown. Branches issuing from the middle portion of the hyphæ, spreading, simple or 2–3-parted, hyaline at first, becoming brown, 15–30 x 2½μ, faintly septate, bearing at their tips the cylindrical, hyaline, straight; obtuse, 3–4-nucleate, 8–10 x 1½–2μ conidia.

The effused hyphæ appear like a thin, pale rose-colored pubescence on the bark.

Closely allied to *C. stachyobola* Sacc., but the color is different, the branches often divided and the hyphæ not perceptibly swollen at the base.

Stachylidium caricinum E. & E.

On dead leaves of *Carex Fraseri*, Nuttallburg, West Va., Feb. 1894 (L. W. Nuttall, No. 335).

Hyphæ fasciculate, brown, septate, 600–700 x 3½μ, simple or occasionally forked above, towards the top, with short-cylindrical, hyaline branches opposite or in whorls of three, bearing at their tips the elliptical, hyaline, 4–5 x 1½–2μ conidia, collected into a globose head 10–12μ diam.

Coniosporium microsporum E. & E., n. sp.

On dead herbaceous stems (*Senecio triangularis*), Medicine Bow Range, Colo., July, 1894 (Prof. C. S. Crandall, No. 23).

Acervuli at first covered by the thin epidermis, soon erumpent, 1–3 mm. diam., black, consisting of a mass of minute (3μ), globose, olive-brown, conidia.

Torula (Trachytora) sporodesmoides E. & E.

On bark of dead limbs, Pasadena, Cala., Jan. 1894 (Prof. A. J. McClatchie, No. 622).

Pulvinate or subeffused, pulvinuli, hemispherical, sooty black, ½–¾ mm. diam. Creeping mycelium scanty, hyaline at first, sending up short, fertile branches, from which the concatenate conidia are formed by constriction. Conidia elliptical, 8–10 x 5–6μ, uniseptate but not constricted, yellowish-brown at first, becoming nearly opake and distinctly roughened. Often where 2 or more threads lie in contact, the cells of the different threads become laterally connate, forming irregularly shaped aggregations of conidia resembling *Sporodesmium.*

This differs from *T. dimidiata* Penz. in the uniseptate, rough conidia.

Fusicladium Staticis E. & E.

On living leaves of *Statice Limonium*, Cape May, N. J., Sept. 1894 (Commons, No. 2,565).

Spots orbicular, 2–5 mm. diam., purplish at first, then rubiginous with a purplish border, becoming paler in the center and finally subdeciduous. Hyphæ epiphyllous, fasciculate, 40–60 x 4μ, brown, septate, subgeniculate above. Conidia oblong with the ends obtusely pointed, subolivaceous, 1- (exceptionally 2-) septate, 10–16 x 3–4μ.

The tufts of hyphæ are crowded in the central part of the spots.

Fusicladium Aplectri E. & E.

On leaves of *Aplectrum hyemale*, Naaman's Creek, Del., Apr. 1894 (Commons, No. 2,408).

Spots irregular, whitish, with a shaded, purple border, 1 cm. diam. Hyphæ fasciculate, olivaceous, simple, 2–3-septate, 65–75 x 5–6μ, mostly twisted or abruptly bent at the tips, olive-brown. Conidia terminal, elliptical, greenish, granular, continuous at first, becoming 1-septate, 12–15 x 6–7μ.

Cladosporium aterrimum E. & E.

On rotten wood, Rockport, Ks., Nov. 1893 (Bartholomew, No. 1,256).

At first densely tufted, tufts soon effused, forming an olive-black, velvety stratum 1 or more cm. in extent. Fertile hyphæ slender, sparingly septate, 100–150 x 2½μ, nearly straight, simple. Conidia terminal, at first elliptical, 3–5μ long and continuous, then oblong-cylindrical, uniseptate, 5–7 x 2½μ, ends obtuse. Probably the subiculum of some Pyrenomycete.

C. lignatile Schw. is said to have the hyphæ very short ("brevissimis").

Cercospora (Cercosporella) albomaculans E. & E.

On leaves of *Brassica campestris*, Berkeley, Cala., Feb. 1894 (W. C. Blasdale, No. 201).

Spots suborbicular, white with a narrow, darker margin, ½–1 cm. diam. Hyphæ amphigenous, tufted, short, 8–12 x 2μ, hyaline, continuous. Conidia cylindrical, hyaline, straight or slightly curved, of about equal thickness throughout, 40–65 x 2–2½μ, becoming faintly 3-septate. The tufts are very minute.

Distinguished from the other species on *Cruciferæ* by its large white spots and cylindrical conidia which resemble the sporules of Septoria.

Cercospora (Cercosporella) Fraseræ E. & E.

On leaves of *Frasera speciosa*, mountains west of Bear Valley, Colo., July, 1894 (Prof. C. S. Crandall, No. 65).

Spots large (½–1 cm.), pale brown with a narrow, black border. Hyphæ in scattered tufts, appearing under the lens like minute, pale white granules, continuous, hyaline, 15–20 x 3μ. Conidia gradually attenuated above, hyaline, faintly 1–4-septate, 80–110 x 3–3½μ.

The general appearance is about the same as that of *Marsonia Fraseræ* E. & E., but this is quite a different thing.

Cercospora Borreriea E. & E.

On leaves of *Borreria micrantha*, Biloxi, Miss., July, 1893 (Prof. S. M. Tracy).

Hypophyllous. Tufts effused, forming a thin, olivaceous coating. Hyphæ slender, undulate or crisped and geniculate, 100–120 x 3–3½μ, brown, nucleate and indistinctly and sparingly septate. Conidia slender lanceolate, hyaline, 3–5-septate, 35–45 x 3–3½μ.

Cercospora ribicola E. & E.

On leaves of *Ribes sanguineum*, Seattle, Wash., Aug. 1893 (C. V. Piper, No. 81).

Spots numerous, subangular and partly limited by the veinlets, definite but without any distinct border, red-rusty brown, 2–4 mm. diam. Tufts mostly epiphyllous, sphæriæform, not effused, appearing like small, clustered, superficial perithecia. Hyphæ densely fasciculate, pale brown, continuous, simple 25–35 x 3½–4μ. Conidia lanceolate, hyaline, nucleate and 1–3-septate, 35–80 x 3–4μ.

Quite different from *C. marginalis* Thum. Well characterized by its red-brown spots and sphæriæform tufts of hyphæ.

Cercospora Cirsii E. & E.

On *Cnicus remotifolius*, Skamania Co., Wash., Aug. 1886 (W. N. Suksdorf, No. 291).

Spots dark brown, paler below, suborbicular, 3–5 mm. diam. or by confluence irregular and larger, often marginal, definite. Hyphæ epiphyllous, tufted, the small black tufts thickly covering the spots, short, simple, pale brown, nearly entire, 15–30 x 3½–4μ. Conidia slender, hyaline, 4–6-septate, 50–80 x 3½μ.

Cercospora Baccharidis E. & E.

On *Baccharis Douglasii*, Berkeley, Cala., June, 1894 (W. C. Blasdale, No. 254).

Tufts effused, at first on irregular areas of the green leaf, partly bounded by the veinlets, the part of the leaf occupied soon becoming brown and dead. Hyphæ densely cespitose, simple, hyaline, mostly continuous, 25–40 x 5μ. Conidia cylindrical, hyaline, obtuse at the ends, 1–3-septate, often constricted at the septa. The tufts of hyphæ are of a pale rose color, nearly white and are found on both sides of the leaf.

Cercospora melanochæta E. & E.

On leaves of *Celastrus scandens*, Louisville, Kansas, Oct. 1893 (E. Bartholomew, No. 1,210).

Spots amphigenous, slaty black, with the center whitish and the margin shading off into rusty brown, suborbicular, ½–1 cm. diam. Hyphæ dark brown, septate, subundulate above, 40–60 x 3½–4μ, forming dense sphæriæform, tobacco-brown tufts on the whitish center of the spots on both sides of the leaf. Conidia clavate-cylindrical, brown, 3–5-septate, 40–70 x 4–5μ. The dark part of the spots, especially below is covered with numerous, black, sterile perithecia.

Cercospora columnare E. & E.

On dried up leaves of *Phaseolus* (cult.), Newfield, N. J., Sept. 1894.

Amphigenous but mostly hypophyllous. Hyphæ erect, fasciculate, forming a compact bundle or tuft like *Isariopsis*, 150–230 x 4μ, brown, sparingly septate. Conidia oblong-cylindrical, 1–5-septate, not constricted, brownish, mostly a little curved, 40–60 x 5–6μ. .

C. Phaseolorum Cke. is said to have the hyphæ short ("abbreviatis") which can hardly apply to this.

Cercospora Œnotheræ E. & E.

On leaves of *Œnothera biennis*, Nuttallburg, West Va., Oct. 1894 (L. W. Nuttall, No. 599).

Spots irregular, mostly elongated, grayish-brown, subangular, 3–5 x 2–3 mm., subconfluent. Hyphæ amphigenous, subhyaline, continuous or faintly 1–2-septate, 15–20 x 3μ, in minute scattered tufts, few in a tuft, spreading, subundulate. Conidia linear or only slightly attenuated above, smoky-hyaline, nucleate and faintly 3–5- or more-septate, 25–80 x 2–2½μ, straight or only slightly curved.

Cercospora Merrowi E. & E.

On *Isopyrum biternatum*, Ann Arbor, Mich., Oct. 1893 (Harriet L. Merrow).

Hypophyllous, on dead blackened parts of the leaves. Hyphæ loosely tufted, subeffused, simple, clavate, continuous, 15–30 x 4μ, yellowish to the naked eye, nearly hyaline under the microscope. Conidia, 1–3-septate, hyaline, 15–60 x 4–6μ.

The shorter ones are cylindrical and mostly 1-septate, and resemble the conidia of *Ramularia Actææ*, but the longer ones are narrowed above and 3-(or more-)? septate.

Cercospora Briareus E. & E.

On leaves of *Acerates viridiflora*, near Elkton, Md., Aug. 1894 (Commons, No. 2,537).

Spots amphigenous, dull livid-purple, small, subelongated, 1–3 x 1 mm., subindefinite or partly limited by the veinlets. Hyphæ amphigenous, loosely tufted, spreading, subundulate, simple, equal, olive-brown, continuous or 1–3-septate, obtuse, 35–45 x 5–6μ. Conidia slender, 40–80 x 3½–4½μ, 6–8-septate, nearly straight, slightly brownish.

The spots, especially on the under side of the leaf are not perceptible; the hyphæ spreading over green areas of the leaf enclosed by the veinlets.

Heterosporium caulicolum E. & E.

On dead stems of *Rumex occidentalis*, North Park, Colo., July, 1894 (Prof. C. S. Crandall, No. 72).

Tufts effused. Hyphæ cespitose, stout, olive-brown (under the microscope), septate, torulose, subgeniculate above, 80–110 x 4–5μ. Conidia elliptical or oblong, pale yellowish-brown, 1–3-septate, 12–26 (mostly about 15) x 7–10μ, minutely echinulate-roughened. Appears like a coarse, black pubescence on the stems.

Heterosporium sphæriæforme E. & E.

On dead stems of *Eriogonum*, Fort Collins, Colo. (C. F. Baker, No. 270).

Hyphæ as in *H. caulicolum* E. & E. but not as rigid and collected in dense, scattered, olivaceous, sphæriæform, tufts ⅓–½ mm. diam., resembling a *Puccinia* or *Sphæria*. Conidia elliptical or oblong, 1–4- (mostly 1–2-) septate, 12–30 x 8–12μ, minutely echinulate-roughened, pale yellow-brown.

Heterosporium Eucalypti E. & E.

On dead leaves of *Eucalyptus*, California, Nov. 1893 (A. J. McClatchie, No. 542).

Hypophyllous, forming small (1–2 mm.), olive-black, orbicular patches scattered over the lower side of the leaf. Hyphæ subfasciculate-effused, pale yellowish-brown, continuous or sparingly septate, 70–80 x 4–5μ, geniculate-subundulate, slightly swollen at the tips. Conidia oblong-elliptical, 1–2-septate, pale yellowish, echinulate, 15–27 x 10–12μ.

Heterosporium oladosporioides E. & E.

On brown paper exposed by the roadside, Ann Arbor, Mich., May, 1894 (L. N. Johnson, Nö. 1,599).

Maculiform. Hyphæ erect, subfasciculate, brown, 90–110 x 4–5μ, septate, subundulate or subnodulose above. Conidia terminal, hyaline and continuous at first, then pale brown and minutely echinulate, 1–2-septate, 10–16 x 5–7μ not constricted.

The hyphæ form small black scattered patches about 2 mm. diam.

Heterosporium Trillii E. & E.

On leaves (partly dead) of *Trillium ovatum*, Latah Co., Idaho, July, 1893 (C. V. Piper, No. 128).

Spots at first suborbicular, gray with a whitish margin, soon confluent, overrunning and killing the leaves, which then become rusty brown. Hyphæ fasciculate, short, 30–50 x 5–6μ, variously toothed and shouldered above and more or less crooked, sparingly septate. Conidia oblong-cylindrical, 12–30 x 5–8μ, 1–3-septate, minutely echinulate, yellow-brown.

Macrosporium hybridum E. & E.

On bark of decaying *Sambucus glauca*, Pullman, Wash., Oct. 1893 (C. V. Piper, No. 151).

Forming black, subelongated patches or irregularly scattered. Hyphæ cespitose, olive-brown, coarse, 100–110 x 6–7μ, geniculate and subtorulose above, finally closely septate. Conidia variable; at first oblong-elliptical and mostly uniseptate, 8–15 x 5–7μ, pale yellowish-brown, then oblong, 2–3-septate and constricted, granular, 12–25 x 8–12μ. Other conidia are globose, 12–15μ, sarcinuliform, with two septa crossing each other at right angles, others again broad-clavate, 5–9-septate and muriform, 50–70 x 12–15μ.

The members of this genus are so variable that we have ventured to describe only forms with marked and recognizable characters.

Macrosporium iridicolum E. & E.

On leaves of *Iris Missouriensis*, Moscow, Idaho, May, 1894 (Prof. L. F. Henderson, No. 2,640).

Hyphæ short, tufted, obovate-oblong, continuous, 12–15 x 5–6µ, pale yellowish. Conidia clavate, 5–10-septate and muriform, 40–120 x 20–25µ, including the stout, cylindrical, persistent stipe. It is possible that what we have taken for hyphæ are tufts of young conidia; if so, the conidia are sessile. This is quite distinct from *Macrosporium Iridis* C. & E.

The tufts are at first scattered and distinct but finally confluent, forming pulverulent black patches consisting entirely of the free conidia.

Macrosporium Pelargonii E. & E.

On leaves of *Pelargonium* (cult.), Pasadena, Cala., Feb. 1894 (Prof. A. J. McClatchie).

Spots orbicular, 1–3 mm. diam., greenish at first, then rusty brown, with a narrow, raised margin causing them to appear discoid. Hyphæ amphigenous but more abundant above, effused or sparingly fasciculate, yellow-brown, erect, 2–3-septate, swollen at the tips, 25–30 x 5–6µ, bearing the terminal, obovate, or subquadrate, 3-septate, and muriform, 20–30 x 18–22µ conidia, which are mostly constricted at the middle septum and have no pedicel.

Macrosporium tabacinum E. & E.

On leaves of tobacco, North Carolina, Oct. 1891 (Prof. Gerald McCarthy), Missouri (Miss Clendinin).

Spots amphigenous, numerous, small, irregular or suborbicular, definite, thin, white, with a narrow, raised margin, 1–3 mm. diam. Hyphæ amphigenous, fasciculate, tufts effused, septate, geniculate above, ferruginous-brown, 30–50 x 3–4µ, crooked and spreading. Conidia obovate-clavate, stipitate, 3–9-septate and muriformly divided, 50–90 x 10–15µ. The smaller conidia are often without any stipe, while the larger ones have a persistent stipe from 8–25µ long.

This is closely allied to *M. caudatum* C. & E. It is called by the planters "white speck," and with *Phyllosticta tabaci* Pass. is very injurious to the plants.

Macrosporium olivaceum E. & E.

Parasitic on *Sphæropsis Asiminæ* E. & E., on dead limbs of *Asimina triloba*, Nuttallburg, West Va., March, 1894 (L. W. Nuttall, No. 388).

Forms a light olive, velutinous coat over the pustules of the

Sphæropsis. Hyphæ tufted, yellowish-brown (under the microscope), septate, erect, nearly straight or subundulate, 80–100 x 4–5μ. Conidia obovate or obpiriform, 3–5-septate and muriform, brown, 24–38 x 15–20μ, terminal, sessile. Conidia also occur subcubical or subglobose, 15–20μ diam. with 2-septa crossing each other at right angles.

Sporodesmium fructigenum E. & E.

On decaying apples, Las Cruces, New Mexico, Oct. 1893 (E. W. Wooton).

Appears like a thin, dark colored, velvety coating, appearing first around the stem end but finally spreading over the greater part of the apple Conidia subglobose or elliptical, stipitate, yellowish and uniseptate at first, finally nearly opake and muriform, 12–26μ in the longer diameter.

The conidia have a berry-like structure like that of *S. Rauii* E. & H. or *S. moriforme* Pk. The pedicels, which are 12–15 x 3μ are deciduous.

Sporodesmium subcupulatum E. & E.

On dead *Sambucus melanocarpa*, Cameron Pass, Colorado, July, 1894 (C. F. Baker, No. 236, partly).

At first tuberculiform, minute, ⅓–½ mm. diam., erumpent and surrounded by the ruptured epidermis, becoming concave and often oblong 1–2 mm. long, ½–¾ mm. wide, slaty black; conidia olivaceous, muriform, subglobose, 10–15μ diam., or subelliptical or clavate-oblong, 20–30 x 10–12μ, sessile or with a short, thick pedicel. In the concave stage the acervuli and conidia are paler.

Sporodesmium tuberculiforme E. & E., n. sp.

On dead stems of *Sambucus racemosa*, near Rabbit Ear Pass, N. W. Colo., alt. 10,000 ft., July, 1894 (Prof. C. S. Crandall, No. 15).

Sporodochia tuberculiform, black, inside and out, about 1 mm. diam., flattened above. Conidia irregular in shape and variable in size, subcubical, subglobose, subelliptical, consisting of 2–20 subglobose cells variously conglomerated so as to form the conidia 8–20μ diam.

The tubercular mass consists almost entirely of the compacted conidia which are more perfectly developed in the superficial layer.

Podosporiella E. & E., n. gen. of *Phæostilbeæ Phragmosporæ*.

Stroma cellular, soft, not carbonaceous, short-cylindrical. Hyphæ short, simple, arising from all parts of the stroma. Conidia terminal, oblong or cylindrical, brown, 2- or more-septate.

Differs from *Podosporium* in its simple, cellular stroma (stipe).

Podosporiella humilis E. & E.

On leaves of *Garrya Veitchii*, Echo Mt., Cala., July, 1894 (Prof. A. J. McClatchie, No. 736).

Spots orbicular, brown, with a definite, dark margin 2–4 mm. diam. Stromata hypophyllous, scattered on the spots, black, short-cylindrical, or conic-cylindrical, about 1 mm. high and ½ mm. thick, of membranaceo-cellular structure. Hyphæ spreading on all sides from the stroma, pale brown, simple, continuous, 15–20 x 4–5μ, bearing the terminal, solitary, oblong-cylindrical, pale-brown, uniseptate at first, then 2–4-septate, 15–27 x 6–7μ conidia.

Illosporium cæspitosum E. & E.

On rotten wood, Nuttallburg, West Va., Dec. 1893 (L. W. Nuttall, No. 231).

Sporodochia globose, 100–110μ diam., cespitose, forming tufts about 1 mm. diam. Hyphæ 6–8μ thick, branched, the branches curved or tortuous. Conidia globose or ovate 6–12μ diam.

Differs from *I. coccinellum* Cke. in its color, and larger, cespitose sporodochia.

Illosporium album E. & E.

On cypress bark, Louisiana (Langlois, No. 284).

Sporodochia gregarious, milk-white, ovate, 140–160 x 100–110μ. Hyphæ imperfectly defined, free and mostly curved above, united below into a coarsely cellular, mass. Conidia peripherical, subglobose, 8–10μ diam.

Differs from *I. pallidum* Cooke, in its smaller sporodochia, imperfectly defined hyphæ, and milk-white color.

Trichægum nodulosum E. & E.

On dead leaves of *Carex Fraseri*, Nuttallburg, West Va., Feb. 1894 (L. W. Nuttall, No. 333).

Erumpent, tufted, becoming subeffused, black, tufts gregarious forming subvelutinous patches 2–4 mm. across, or when standing singly, the hyphæ and conidia forming a compact mass, ½–1 mm. diam., and resembling somewhat the sorus of a *Puccinia*. Hyphæ simple, sparingly fasciculate, brown, septate, often swollen at the septa, about 4μ thick and 200–300μ long. Conidia near the base of the hyphæ, at first elliptical, yellowish-hyaline, uniseptate 8–10 x 6–7μ, soon becoming 4–6-septate, muriform and opake, 10–25μ diam., subglobose, obovate, or elliptical.

Pilacre gracilipes E. & E.

On rotten wood, Nuttallburg, West Va., Dec. 1893 (L. W. Nuttall, No. 274).

Scattered, stem slender, white-pruinose, 3 mm. long, ¼–⅓ mm. thick. Head subhemispherical, olivaceous, about 1 mm. diam. Fertile hyphæ hyaline, dichotomously branched, 2–2½μ thick, bearing the conidia laterally. Conidia globose or subglobose, yellow-brown under the microscope, 4–5½μ diam.

Smaller and of a more slender growth than *P. Petersii* B. & C.

Tubercularia hamata E. & E.

On dead limbs of *Celtis occidentalis*, Nuttallburg, West Va., Feb. 1894 (L. W. Nuttall, No. 313).

Depressed-hemispherical, umbonate, soon becoming black, ½–1½ mm. diam. Conidia oblong, slightly curved, hyaline, 5–8 x 1½–2μ, on slender, simple sporophores 30–40μ long, incurved or involute at the tips.

Hymenula cerealis E. & E.

On wheat straw, Nuttallburg, West Va., May, 1894 (L. W. Nuttall, No. 495).

Sporodochia gelatinous, orbicular, yellowish-amber color, becoming darker, at first subpulvinate, becoming depressed or flattened, ½–¾ mm. diam. Basidia slender, 25–30 x 1¼μ, simple or oftener branched, the branches erect. Conidia hyaline, oblong, minute, 3–4 x 1–1¼μ.

Microcera erumpens E. & E.

On dead limbs of *Tsuga Canadensis*, Nuttallburg, West Va., Feb. 1894 (L. W. Nuttall, No. 371).

Sporodochia depressed-globose, ½ mm. diam., at first covered by the epidermis, soon exposed and bare, orange-red, at length disappearing and leaving cup-shaped cavities in the bark. Conidia falcate, nucleate and finally 3- or more-septate, 75–83 x 3–4μ, hyaline, borne on short (20–35μ) sporophores which are more or less branched above.

Differs from *M. coccophila* Desm. in the shape of the sporodochia and their subcuticular origin.